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ABSTRACT

The National Center for Education Statistics (NCES) collects statistics on the condition of education in the United States, analyzes and reports the meaning and significance of these statistics, and assists states and local education agencies in improving their statistical systems. This publication contains a summary of all recent data collections and current data systems conducted by the NCES and information on the use of those collections. Information is provided on statistical data maintained on elementary and secondary education, postsecondary education, educational assessment, national longitudinal studies, vocational education, and the major publications of the NCES. Under each of the educational categories of information, users of this manual will find information on data uses, plans for the future, selected publications and tabulations, data tapes, and the data collection calendar. Major publications that are described include: "The Condition of Education," "Digest of Education Statistics," and "Projections of Education Statistics". (TJH)

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Programs and Plans

of the
National Center for
Education Statistics
1990 Edition

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"The purpose of the Center shall be to collect, and analyze, and disseminate statistics and other data related to education in the United States and in other nations."—Section 406(b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e-1).

June 1990

Commissioner's Statement

This publication contains a summary of all recent data collections and current data systems conducted by the National Center for Education Statistics (NCES). In it, the reader can find both general and detailed information on elementary and secondary education, postsecondary education, educational assessment, national longitudinal studies, vocational education, and the major publications of NCES. It represents a rich and varied collection, and suggests the growth and wide-ranging interests of NCES.

Growth, in fact, has been one of the hallmarks of NCES in recent years. For example, in just the last few years, a number of major new surveys, studies, and assessments have been generated: a survey of schools and school staffs, including a teacher follow up survey; new public and private school surveys; a revamped and expansive survey of all postsecondary education facilities; a survey of student aid practices; and a survey of postsecondary faculty. In addition, NCES is responsible for the National Assessment of Educational Progress (which has recently been expanded); student transcripts studies; and increased international data collection efforts. Detailed data on a wide variety of vocational education issues are also available from a number of these new studies.

Because more education data are required, however, NCES has planned to enlarge its data collection programs. At the elementary and secondary levels, the Common Core of Data (CCD) will have an expanded fiscal component, and may add topical supplements periodically. The National Cooperative Education Statistics System is working to enhance data elements comparable across States. NCES is inaugurating a new type of survey, a household survey on issues of keen interest to educators and policymakers that cannot be studied through school-based studies. At the postsecondary level, an early estimates component will be added to the Integrated Postsecondary Education Data System (IPEDS). Two new longitudinal studies will produce data on beginning postsecondary students and recent baccalaureate degree recipients. NAEP will attempt to assess performance at the State level, and more international assessments are planned. In brief, NCES has expanded and continues to augment its data collection systems so that all important aspects of education can be studied, measured, and evaluated.

I hope this volume will find an eager audience among the policymaking and research communities. It describes concisely all the data-gathering programs of NCES. The format of this publication is straight forward. Each section contains a brief introduction, a section of actual data uses, summaries of the various programs, plans, selected publications, tabulations, available tapes, and finally a data collection calendar for that group of programs. Within most program descriptions are contained: a brief introduction, a design section in which the blueprint of the program is described, a components section detailing what data are collected, and a final section addressed to issues of concern to policymakers and researchers.

I hope you find the material helpful and useful. I invite you to send us comments on how to make future editions even more useful.

Emerson J. Elliott
Acting Commissioner of Education Statistics

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Introduction

The National Center for Education Statistics (NCES) collects statistics on the condition of education in the United States, analyzes and reports the meaning and significance of these statistics, and assists States and local education agencies in improving their statistical systems.

NCES supports a wide range of activities: providing policy-relevant data on such issues as access of minorities to postsecondary education, impact of enrollment changes on institutions, and the outcomes of education; assisting State and local education agencies in improving information systems; providing current data on vocational education; and producing longitudinal data on various cohorts of students from elementary through postsecondary education, transitions into the work force, and family formation.

The Center's fiscal year 1990 program, based on an appropriation of approximately \$40 million, is directed toward:

Maintaining seven major cross-sectional databases: at the elementary level, the **Common Core of Data** and the **Schools and Staffing Survey**; and, at the postsecondary level, the **Integrated Postsecondary Education Data System**, the **National Postsecondary Student Aid Study**, the **Recent College Graduates Survey**, the **National Survey of Postsecondary Faculty**, and the **Survey of Earned Doctorates Awarded in the United States**. In addition, a new **Private School Survey** has been planned, as well as a new, wide-ranging study, the **National Household Education Survey**. These data bases are the principle sources of the Center's most widely used publications - *The Condition of Education*, *Digest of Education Statistics*, and *Projections of Education Statistics*.

Analyzing and producing data from the Center's three longitudinal studies (**National Longitudinal Study of 1972, High School and Beyond**, and **National Education Longitudinal Study of 1988**) that address differences in student achievement, effects of financial aid on access to postsecondary education, youth employment, high school dropouts, discipline and order, and the quality of education in public and private schools. A new longitudinal study, **Beginning Postsecondary Students**, has been initiated, and is the first attempt by NCES to produce longitudinal data beginning with a postsecondary cohort. **Beginning Postsecondary Students** will be based on students first entering postsecondary education in 1989-90, and will follow them through their postsecondary educational experiences and into the labor force or other endeavors. Another new study, **Baccalaureate and Beyond**, is a proposed longitudinal survey which is being planned for implementation during 1994. It will follow a cohort of students, who are near graduation, into the work force or further educational endeavors.

Producing results of national achievement measures through the **National Assessment of Educational Progress** which assesses academic achievement in a number of domains.

Administering surveys through the **Fast Response Survey System** that provide data within 1 year on current policy issues.

Participating in international surveys of educational achievement and programs to develop cross-national educational data and indicators.

Elementary and Secondary Education

The focus of the National Center for Education Statistics' (NCES) program at the elementary/secondary level is to provide information on the condition of public and private education to the Nation. The basic program includes National, State, and local data collection systems on public and private, elementary and secondary education systems. An important recent addition to the Center's data collection programs is the Schools and Staffing Survey. Together with the Common Core of Data, and a number of other surveys, they supply a wealth of information about the condition of public/private, elementary/secondary education in the Nation.

Data Uses:

The statistics NCES collects from State education agencies and from other special surveys are used extensively in many ways by persons outside of NCES. They are used for testimony before Congressional Committees, for planning in various Federal executive departments, and for planning and designing projects by professional organizations. They are also used by State executive and legislative staffs in making interstate comparisons, by associations of local school systems, by researchers in colleges, universities, and other facilities, by various businesses that sell to educational institutions, and in State education agencies (SEA's) and local education agencies (LEAs) as well as in other nations, and by the media in reporting on educational issues and events. Examples of data uses outside of NCES during this past year are reviewed below.

The government makes many requests for data. For example, recently a United States Senator asked for pupil-teacher ratio data; another Senator was interested in the demand for elementary and secondary school teachers; a United States congressperson wanted to know how one State compared with other States on expenditures for full-time students in education; a department of the executive branch asked for a list of public schools by State.

The media also make many requests for NCES data on elementary and secondary education: a prominent weekly magazine recently needed enrollment and high school completion data; a national radio organization secured data on Federal government revenues for public schools; a large daily newspaper requested information on the trends in school enrollments of 3- and 4-year-olds.

Other requests include: an educational organization needed public school enrollment figures, by race; a researcher at a large urban university asked for high school completion information for students from Washington, D.C; a manufacturing corporation requested data on current expenditures by educational program, and on how an individual State compared in education expenditures with other States; another large company requested data on the education of the handicapped.

Surveys and Studies:

Common Core of Data:

The Common Core of Data (CCD) is the primary database on elementary and secondary public education of the National Center for Education Statistics (NCES). CCD is a comprehensive, annual, national statistical database comparable across all States on all public elementary and secondary schools and school districts.

DESIGN:

The CCD survey collects data about all public elementary and secondary schools, all local education agencies, and all State education agencies throughout the United States. CCD contains three categories of information: general descriptive information; basic statistics; and fiscal data. The general descriptive information includes name, address, phone number, and type of locale; basic statistics include number of students and staff, and demographic data on each; and fiscal data cover revenues and current expenditures.

The CCD comprises a set of 5 surveys sent to State education departments. Most of the data are obtained from administrative records maintained by the State education agencies (SEAs). Statistical information on the universe of public elementary and secondary schools (approximately 87,000), public school districts (approximately 16,000) and the 50 States, the District of Columbia, and outlying areas are collected annually. The SEAs compile CCD-requested data into prescribed formats and transmit the information to NCES. Data deal with the basic information about public schools. Topics covered include: enrollment by grade, numbers of teachers and other staff, finances, and teacher salaries.

The objectives of the CCD are twofold. First, it is to provide an official listing of public elementary and secondary schools in the Nation. Second, it is to provide basic information and descriptive statistics on public elementary and secondary schools and schooling in general.

COMPONENTS:

The CCD consists of the following components:

The Public School Universe:

This census of schools provides information on all public elementary and secondary schools in operation during a school year. This file includes information on: school location and type; enrollment by grade and other categories; and the number of classroom teachers.

Local Education:

This census of LEAs provides information for the universe of LEAs for: location and type of agency; operating status; fiscal status and control status.

State Aggregate Non-Fiscal:

This census of SEAs provides information on all students and staff aggregated at the State level for fall membership by grade level; full-time equivalent staff by major employment category; and high school graduates.

State Aggregate Fiscal Report:

This census of SEAs provides aggregate data for States: average daily attendance; school district revenues by source; and expenditures by major function.

Early Estimates:

This fall survey of SEAs provides early estimates of key education statistics that are reported by December 31 for the current school year. Among the key statistics are: student and teacher counts; high school graduate counts; and current expenditures.

POLICY AND RESEARCH ISSUES:

The five data files within CCD can be used separately or in conjunction with one another to provide a basis for many topics of interest. Examples of issues which could be addressed through CCD data include the following: A) Size of school and pupil/teacher ratio; B) Size of school district and region of the country; C) Locale of school and racial/ethnic composition; D) Racial/ethnic composition and pupil/teacher ratio; E) Locale of school and percent of free-lunch eligible students; F) Grade level and pupil/teacher ratio; G) Size of school district and number of handicapped students; H) Students by grade level and number of graduates; I) State expenditure for education and expenditure per pupil.

Further information on CCD may be obtained from:

George H. Wade
Elementary and Secondary Education
Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5651
Telephone number (202) 357-6624

Schools and Staffing Survey:

Information on the school work force and teacher supply and demand are fundamental features of America's public and private school landscape. Yet, until recently there has been a lack of data on characteristics of our children's teachers and administrators and their workplace conditions. The Schools and Staffing Survey (SASS) has been designed to meet this need. It is a comprehensive public and private education database that combines and expands three separate surveys NCES has conducted in the past. These include surveys of teacher demand and shortage, surveys of public and private schools, and of public and private school teachers. The school administrator survey is a new addition to the NCES database.

DESIGN:

Schools were the primary sampling unit for the SASS, and a sample of teachers was selected in each school; public school districts were included in the sample when one or more of their schools was selected. The 1987-88 SASS included approximately 12,800 schools (9,300 public and 3,500 private), 65,000 teachers (52,000 public and 13,000 private), and 5,600 public school districts. The survey was conducted by mail with telephone follow-ups.

The public school sample was selected from the public school file maintained by a private firm, Quality Education Data (QED) Inc. For public schools, the QED file is complete, and, therefore, can be used for sampling purposes. All public schools in the file were stratified by the 50 States and the District of Columbia, and then by three grade levels (elementary, secondary, and combined).

Similarly, the private school sample was selected primarily from the QED file of private schools. For private schools, however, the QED list is known to be incomplete. To improve coverage, two additional steps were taken. The first step was to update the QED file with current lists of schools from private school associations. All private schools on the QED file and the lists from private school associations were then stratified by the 50 States and the District of Columbia. Within each State and the District of Columbia, schools were further stratified by three grade levels (elementary, secondary, and combined), and by thirteen affiliation groups as defined by religious orientation. The second step was to include an area frame sample, containing 75 Primary Sampling Units (PSUs) - the same PSUs as were used in the 1973 Private School Survey; each PSU consisting of a county or a group of counties. The 75 PSUs were selected from the universe of 2,497 PSUs. All private schools found in the area search were included in the sample. This dual sample frame, consisting of the augmented QED list and area frame were used in the 1987-88 survey for sampling private schools.

The SASS sample has been designed to support the following types of estimates and comparisons: national and State estimates for public schools and teachers; estimates for private schools and teachers at the national level and for selected orientation groupings; national comparisons of elementary, secondary, and combined schools and teachers. SASS was first conducted in the 1987-88 school year, and will be conducted again in 1991, and at two year

intervals thereafter.

COMPONENTS:

SASS consists of the following components:

Teacher Demand and Shortage Questionnaire:

A survey of public school districts and of private schools of aggregate demand for teachers (new and continuing) by level and teaching field; measures of teacher shortages by field; district and school policies on teacher salaries, compensation, retirement, hiring, and other factors affecting supply and demand for teachers.

School Questionnaire:

A survey of public and private schools about school programs, policies and conditions; student characteristics; staffing patterns and teacher turnover.

School Administrator Questionnaire:

A survey of public school principals and private school heads about their background characteristics and qualifications, and their perceptions of school climate and conditions.

Teacher Questionnaire:

A survey of public and private school teachers about demographic characteristics; teacher preparation and qualifications; career history and plans; teaching assignments; working conditions; and perceptions of school environment and the teaching profession.

POLICY AND RESEARCH ISSUES:

The data from the SASS survey will be used by Congress, the Department of Education and other Federal agencies, State Departments of Education, private and other educational associations, and the education research community for the following purposes. First: to assess critical components of teacher supply and demand, shortages and turnover in specific teaching fields, methods of covering unfilled vacancies, and policies, practices and circumstances influencing supply and demand conditions. Second: to monitor school conditions and programs, including basic descriptors of schools, enrollments, organization, curriculum, student programs and services, staffing, student characteristics, school climate, and teacher workplace conditions. Third: to profile the teacher workforce, including demographic characteristics, academic background, qualifications to teach in fields of assignment, workload, career histories and plans, compensation, and perceptions of the teaching profession and of the workplace. Fourth: to profile the principal work force, including demographic characteristics, academic background, qualifications and training for administration, and to assess the school climate and decisionmaking.

Further information on SASS may be obtained from:

Mary P. Rollefson
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Statistics Division
National Center for Education Statistics
555 New Jersey Avenue NW
Washington, DC 20208-5651
Telephone number (202) 357-6336

The Teacher Follow up Survey:

Another component of the Schools and Staffing Survey (SASS) is the Teacher Follow up Survey (TFS). It is treated separately here because it consists of a subsample of SASS, and is implemented one year after the base year SASS. The survey identifies and collects data from three groups of teachers who were interviewed the previous year: A) 2 types of individuals who remain in the teaching profession: those who remain in the same school, as well as those who have moved; and B) those persons who have left the teaching profession. These data will be used to provide information about teacher attrition and retention in the public and private schools and to project teacher demand during the 1990s.

DESIGN:

Two questionnaires comprise the TFS: A) the Teacher Follow up Survey Questionnaire for Former Teachers; B) the Teacher Follow up Survey Questionnaire for Current Teachers, those who remained in the same school as well as those who moved to another school. These questionnaires ask teachers about their current status, occupational changes and plans, reasons for staying in teaching, and attitudes about the teaching profession.

The first administration of SASS was in 1987-88. The TFS was first conducted in the 1988-89 school year with a sample of about 3,000 teachers who had left teaching, and 4,200 who were still in teaching. A follow up is planned for the year after each base-year administration of SASS.

This survey will provide information on the characteristics of persons who leave teaching, their reasons for leaving, and their current occupational status. For those persons who remained in teaching, information will be gathered on their career paths. Comparisons can be made between "leavers" and "stayers", and "movers" (i.e., those teachers who remain in teaching but move to another school). Sampled teachers can be linked back to the base year SASS data to determine relationships between local district and school policies/practices, teacher characteristics and, and teacher attrition and retention. The primary goals are to describe of teacher attrition and retention, and the factors influencing decisions to remain in or to leave teaching.

COMPONENTS:

Questionnaire for Former Teachers:

Primary occupational status; type of business; primary activity;
full-time, part-time; time planning to spend in current job;
new earned degrees, by type and field; plans for returning to
teaching; reasons for leaving teaching; possible areas of
dissatisfaction; opinions on encouraging teachers;
salary; and changes in marital and family status or income.

**Questionnaire
for Current Teachers:**

Primary occupational status; full-time, part-time; primary teaching assignment, by field; teaching certificate; level of students taught; school community type; reasons for leaving previous school; possible areas of dissatisfaction; new degrees earned or pursued; expected duration in teaching; possible steps schools might take to encourage teachers; level of satisfaction; marital status; number of children; academic year base salary; combined family income.

POLICY AND RESEARCH ISSUES:

The TFS can be used to address a number of issues related to teacher turnover, shortages, and availability of an adequate supply of qualified teaching personnel. Leavers, movers, and stayers will be profiled and compared in terms of teaching qualifications, working conditions, attitudes toward teaching, salaries, benefits and other incentives and disincentives for remaining in or leaving the teaching profession.

Further information on TFS may be obtained from:

Sharon A. Bobbitt
Elementary and Secondary Education
Statistics Division
555 New Jersey Avenue NW
Washington, DC 20208-5651
Telephone number (202) 357-6461

The Public School Survey, 1984-85:

Development of the Public School Survey was related to the redesign, two years previously, of the Common Core of Data (CCD). At that time, CCD was reduced to a small number of basic data items collected on schools, with the provision that more detailed information on schools and teachers would be collected on a sample basis as a means of substantially reducing respondent burden. Such sample surveys would contain material that was policy relevant at the time. During the development of the Public School Survey it became clear that there were several important policy issues which focused on teachers. These issues included salary and additional income; background and training as they relate to current assignments; teachers' use of time, particularly that devoted to instruction and planning; and issues relating to class size, homework, and use of aides and volunteers as they relate to school quality/educational output. Thus, it was determined that the focus of the survey would be a teacher questionnaire, and that additional basic descriptive data on schools, and data to be used for classifying teachers would be collected through a school (administrator) questionnaire.

DESIGN:

The sampling frame for the selection of the schools for the Public School Survey was the CCD 1983-84 universe of public elementary and secondary schools. A sample of 2,801 schools, stratified by level (elementary, secondary, other), and local education agency size (1 to 5 schools, 6 to 50 schools, and more than 50 schools) was selected from the universe. A sample of 10,750 teachers, stratified by teaching assignment (elementary, mathematics or science, and other) was selected from the sample schools from lists provided by State Education Agencies (SEAs) and Local Education Agencies (LEAs).

Data collection began with a mailout to schools and teachers in February 1985. Two mail follow ups and a telephone follow up were conducted. The data collection effort was completed in early summer with a resulting response rate of 84.6 percent for schools and 80.0 percent for teachers. This survey was designed to provide estimates at the national level for teachers and schools.

COMPONENTS:

Administrator Questionnaire:

enrollment, minority enrollment; staffing; advanced placement programs; graduates applying for college; use of aides and volunteers; use of computers; and incentive programs for teachers.

**Teacher
Questionnaire:**

Training; experience; subjects being taught; incentives; certification and endorsement; assistance of aides and volunteers; salaries; working hours; additional employment; age; sex; and racial affiliation.

POLICY AND RESEARCH ISSUES:

Eight reports using Public School Survey data have been produced by NCES analysts or by contractors under the direction of NCES analysts and three reports are near publication. These reports cover areas of major concern as well as provide basic descriptive information about schools and teachers. Some of the specific topics covered include: teacher salaries, background, training and experience, incentive programs, moonlighting, working conditions, and vocational education. Additionally, this survey contains many of the same items found on the 1985-86 **Private School Survey**. Consequently, comparisons across public and private schools are possible for many of the items; four reports on public-private comparisons have been produced, and one report is near publication.

For further information on the Public School Survey contact:

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1985-86 Private School Survey:

The Private School Survey of 1983-84 served as the base for the 1985-86 School Survey. Until the 1983-84, surveys of private schools resulted in undercounts of a number of private schools, primarily because many small, independent, private schools were not included. Thus, one of the major goals of the 1983-84 National Survey of Private Schools was to include schools that had not appeared on previous NCES lists. This was accomplished by intensively searching and constructing a much more complete list of private schools for a sample area. The 1983-84 survey discovered that approximately 6,000 private schools nationwide had not been included on previous lists.

In 1985-86, the Private School Survey was a follow up analysis which had two major goals: to update information on private schools (from the 1983-84 study), and to obtain nationally representative data on private school teachers. It should be noted that this survey has been revised and is currently included as a component of the Schools and Staffing Survey.

DESIGN:

The 1985-86 Private School Survey was based on the sampling system developed for the 1983-84 Private School Survey. The 1983-84 survey was carried out in two parts, one based on a "list" frame and one based on an "area" frame. The area frame was used under the assumption that the lists of private schools available to NCES were not comprehensive and that list-building techniques applied to a sample of census areas would reveal some additional private schools. NCES started with the most complete list available, comprising some 21,000 schools, and updated it in 1983-84, based on review of new directories and other published sources. This effort resulted in a list of just under 27,000 schools. This frame was then stratified into 12 strata based on various combinations of religious affiliation and school level. A systematic sample of 1,320 schools was selected. After removing duplicates, nonrespondents, coding errors, and ineligible, the final estimated list universe of schools was 21,710. The response the list sample was 91 percent (1,074 of 1,176 schools).

For the area sample, the basic list of all counties reported from the 1980 census, adjusted so that independent cities were treated as counties and smaller counties were combined with other contiguous counties. This produced a list of 2,497 Primary Sampling Units (PSUs). These PSUs were stratified according to census region, in or out of a Standard Metropolitan Statistical Area (SMSA), and above or below the median private school enrollment for that region and combined SMSA status, yielding 16 strata. The final sample was a systematic one comprising 75 PSUs, 8 of which were drawn with certainty based upon populations exceeding 1.7 million in the 1980 census.

The response rate for the area sample was 81 percent (733 of 901 schools). For each of the sampling units in the area design, schools not overlapping with the list-frame schools were sought by reviewing directories of various types (e.g., private school organizations) and by telephoning officials, churches, chambers of commerce, and selected vendors, and providers of school services. This search produced 901 schools in the 75 PSUs which met NCES criteria for

functioning private schools. (A school was required to have at least 1 grade of first grade or higher to be included. Consequently, many private schools with only preprimary classes were not included.) When weighted, these data inflated to approximately 6,000 schools nationally. Since the area frame was designed not to overlap with the list frame, data from the area sample could be combined with those from the list sample.

The 1985-86 Private School study was designed to produce data representative at the national level. As noted, the 1985-86 Private School Survey was designed as a follow-up of the 1983-84 survey. The same 75 areas were sampled as had been done for the area frame in the 1983-84 survey. Schools were drawn from the lists of schools created in the same sample areas for the "1983-84 Private School Survey." Since the lists were not updated schools established after 1983 were not generally eligible for sampling. That is, the estimates for the 1985-86 study are valid for schools that were in existence in 1983. Some of the estimates contain extrapolations for newly established schools, using assumptions based on data from the 1983-84 survey.

During the fall of 1985 the principal of each sampled school was contacted to obtain the school's participation in the study and to sample up to 10 teachers at the school. During January 1986, questionnaires were mailed to schools and teachers. Two separate questionnaires were distributed, one collecting information on school characteristics from school administrators in a nationally representative sample of private schools, and the second collecting information from a representative sample of teachers among the sampled schools. Since teachers were linked with schools, teacher data could be analyzed by school characteristics as well as teacher characteristics, thus increasing the utility of the information collected.

COMPONENTS:

School Characteristics:

Religious orientation; type; level; size; and years of operation.

Teacher Characteristics:

Religious orientation of the school; type/level of the school;
sex of teacher; and years of experience.

POLICY AND RESEARCH ISSUES:

The 1985-86 Private School Study can be used to address a number of policy-related and research issues. Among the topics that can be evaluated are: the type of staffings in the private schools; changing enrollment patterns; the availability of diverse educational programs; selected characteristics of teachers and administrators in these schools; compensation received by teachers; teaching and non-teaching activities; class size and homework assignments; and teacher

preparation and training. Additionally, many of the items on this survey were the same as those on the 1984-85 **Public School Survey**. Consequently, comparisons across public/private schools are possible on many of the items.

For more information on this survey contact:

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The 1989-90 Private Schools Survey:

With increasing policy concern about alternatives in education, the interest and need for data on private education has also increased. NCES has recognized this need and has determined that a collection on private schools which is comparable to public school data is a NCES priority.

The purposes of this data collection activity are to: A) build an NCES universe frame of private schools that is of sufficient accuracy and completeness to serve as a sampling frame for NCES surveys of private schools; B) generate annual data on the total number of private schools, teachers, and students; and C) subsample the private school universe to produce early estimates of characteristics on a fast-turnaround basis. This survey is conceived as the first step in a long-term effort that will progressively improve NCES universe and sample data on private schools.

DESIGN:

The target population for the survey consists of all private schools in the United States that meet NCES criteria of a school. The goal is to build a complete and accurate list of elementary and secondary private schools. In an effort to achieve this goal, the survey universe will be comprised of schools from three sources. The first source is a 1989 list frame consisting of a commercial list purchased from Quality Education Data (QED), Inc., enhanced by matching with lists provided by twenty-three nation-wide private school associations. The second and third sources are area frame searches conducted by the Bureau of the Census in 1987 and 1989.

The Early Estimates portion of this survey is conducted with a sample of 1,200 schools, selected from the universe of schools identified from the list and area frame search operations. The selected schools will be stratified on affiliation (Catholic, other religious, and nonsectarian), and by grade level (elementary, secondary, and combined). In addition to explicit stratification on these variables, list frame schools will be sorted on region and enrollment.

COMPONENTS:

The 1989-90 Private School Survey:

Religious orientation; level of school; size of school;
length of school year, length of school day; total
enrollment (K - 12); number of high school graduates;
number of teachers employed; private schools operated
in private homes; year school began operating.

POLICY AND RESEARCH ISSUES:

The 1989-90 Private School Survey will parallel the NCES Common Core of Data (CCD) for the public schools, and therefore, produce policy- and research-relevant data similar to the CCD, but for private schools. In addition, issues on: home-based education, the growth of religiously-affiliated schools, the number of private high school graduates, the length of the school year for various private schools, and the number of private school students and teachers are a few of the issues that can be studied with the 1989-90 Private School Survey.

For more information on the 1989-90 Private School Survey contact:

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National Household Education Survey:

The National Household Education Survey (NHES) is the first major attempt by NCES to go beyond the traditional, school-based data collection systems to a household survey. A household survey has the potential to obtain data needed to address many current issues in education.

Historically, NCES has mainly collected data from teachers, students, and schools through its school-based surveys, and administrative records data through its surveys of school districts and State education agencies. NCES has used data from these sources to fulfill its legislative mandate to collect and report information on the condition of education in the United States. The collection of data from noninstitutional samples of individuals, particularly household-based data collections, has been limited to date. The NHES represents a major new initiative for NCES, and holds the promise of enhancing the scope of the issues covered by the collection activities of the Center.

DESIGN:

The NHES is designed as a mechanism for collecting detailed information on educational issues from a relatively large and targeted sample of households in a timely fashion. It will fill a need that existing household surveys, such as the Current Population Survey (CPS) and the Survey of Income and Program Participation (SIPP), cannot satisfy. These surveys were designed to focus on issues other than education. Consequently, they collect limited data on education through supplements to the main surveys. The level of detail in these supplements is often very limited because respondents are already burdened by the data items that are required to address the basic issues of the surveys. In contrast, the NHES focuses exclusively on education issues.

The NHES uses Random Digit Dialing (RDD) to select households for participation in the survey, and Computer Assisted Telephone Interviewing (CATI) to collect information from participating household members. The sample for the NHES is drawn from all telephone households of the noninstitutionalized civilian population in the 50 States and the District of Columbia. During the first full-scale implementation of the NHES, scheduled for 1991, approximately 60,000 households will be sampled.

NCES conducted an extensive field test of the NHES between the fall of 1988 and the spring of 1989. During that field test, the basic methods of NHES - RDD sampling and CATI survey methods - were assessed. As a part of the field test, NCES evaluated the survey methodology as a means of collecting data on the educational experiences (both in-home and out-of-home) of 3- to 5-year-old children. At the same time, NCES evaluated this methodology for collecting data about school dropouts.

Based on the results of the field test, NCES is fielding a full-scale NHES on early childhood education. The NHES will be used as one of the means for monitoring the Nation's progress towards meeting the Nation's goal for the education of young children. Approximately 60,000 households will be screened in order to identify a sample of children 3- to 8-years old. The parents of these children will be interviewed in order to collect information about their children's educational activities, and the role of the family in children's learning. At the same

time, an adult educational supplement will be fielded. Adult household members will be sampled and questioned about their participation in adult education programs.

Because the NHES uses a RDD sampling approach and is restricted to coverage of households with telephones, the field test of the survey focused heavily on the potential bias associated with this sampling approach. Analyses were performed that examined the extent of undercoverage bias for estimates of early childhood education and the enrollment of status of 14- to 21-year-olds. While the results of these analyses were encouraging, NCES will continue to study this issue.

Data for the NHES are being collected primarily through telephone interviewing, a relatively new approach for gathering data related to education issues. However, these data may also be enhanced by special data collections, such as by introducing a longitudinal component to the study design. Data collected by the NHES may also be combined with data from other household data collection programs, such as the Current Population Survey (CPS).

COMPONENTS

National Household Education Survey:

Household members; household characteristics;
educational participation and attainment;
preschool education; adult education;
detailed demographic characteristics.

POLICY AND RESEARCH ISSUES:

The NHES is expected to provide data on a wide range of current education issues. Among the topics that may be addressed through a survey of persons in their households are: preschool education, school-aged children's participation in before- and after-school programs, access and plans to finance postsecondary education, adult and continuing education, family support for and parental involvement in education, grade retention, extra-school learning and home-based education.

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Fast Response Survey System:

The Fast Response Survey System (FRSS) was established in 1975 to collect small amounts of issue-oriented data quickly and with minimum response burden on respondents. This service is available to policy analysts, planners, and decision makers at the Department of Education. FRSS was designed to collect data from educational sectors including: State education agencies, local education agencies, institutions of higher education, public libraries, and adult literacy programs. In addition, the capacity of FRSS is being expanded to support telephone surveys of households on education topics.

In order to present Federal education decision makers with high quality data in a timely fashion, FRSS provides the following: research on the survey topic and instrument design, pretest of the survey instrument, quality control of the survey data, national estimates within 1 year of survey mail-out, response rates of 90 percent or higher, tabulations and other analysis of data, and preparation and dissemination of survey reports.

To qualify for an FRSS survey, the requested data must be: one-time data collections, for policy use, not available elsewhere, limited to a one-page questionnaire which is easily understood and answered by respondents. Data are representative at the national level, drawing from a universe which is appropriate for the study. For example, if a FRSS study were needed on services and resources for young adults in public libraries, the universe would be all public libraries. If an FRSS study were needed on public high school principals' perceptions of academic reform, the universe would be all public high school principals.

The Fast Response Survey System (FRSS) has a new capability beginning in Fall 1989, for conducting brief surveys of households using random digit dialing (RDD) telephone techniques. This will allow for quick turnaround surveys on education issues from the student's family, or parental perspective.

Recent FRSS Surveys:

Services to Children in Public Libraries, 1989: This survey which focused on services to children, complemented a fall 1987 FRSS survey of resources and services to young adults in public libraries. The survey obtained information on the availability of children's librarians and their educational attainment, children's use of various library services, library programs for children and parent, and cooperation among libraries, schools, and day care centers. The survey was mailed to 850 libraries in March 1989 and obtained a 97 percent response. The survey report is scheduled for release in early 1990.

District Use of Research and Development (R&D) Resources, 1989: Requested by the Program for the Improvement of Practice in the Office of Educational Research and Improvement (OERI) in the U.S. Department of Education, this survey asked whether districts had received products and services from OERI-funded R&D resources (i.e, Regional Educational Laboratories, National Research and Development Centers, Educational Resources Information Clearinghouse and National Diffusion Network Facilitators) and how frequently they used these resources. It also obtained information on receipt of R&D services or products (from any source) on selected topics, evaluation of their usefulness, and perceived future needs for R&D. Questionnaires were

mailed in January; data collection was completed in March with a 95 percent response. The survey report is scheduled for release in early 1990.

Private School Early Estimates, 1988: In October 1988, FRSS mailed questionnaires to a sample of 1,200 private schools. The survey, which was the first survey of private schools to be conducted through FRSS, collected early estimate data on enrollments, teachers, and graduates that were comparable to the Common Core of Data early estimates of public schools. Data collection ended in November with a 94 percent response. NCES released early estimates in January, 1989.

Survey on Education Partnerships, 1988: This survey was requested by the Office of Private Sector Initiatives in the U.S. Department of Education. Among the data collected were: number of partnerships, the type of sponsors, and the number of students involved in partnerships. The questionnaire was mailed in May to a sample of 1,500 public schools. Data collection ended in June after obtaining responses from 96 percent of the schools. The survey report was released in February 1989; survey findings were also included in the Department's report, *America's Schools: Everybody's Business*.

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Census Mapping:

Census mapping is the name of a project and process by which the demographic data acquired by the Bureau of the Census in the decennial censuses are aggregated to totals for local education agencies and the States.

The decennial census data are collected by census blocks which vary in size from less than a whole city block to a large portion of the State, depending upon the density of the population in the area. In the Census Mapping project, the location of each census block is identified with reference to the local education agency in which it appears, either in whole or part. The census data for these blocks or parts of these blocks are then totalled to create local education agency totals.

NCES has conducted such a program for the decennial censuses of 1970, 1980, and now for 1990. In 1990, the Bureau of the Census has developed the Topologically Integrated Geographic Encoding and Referencing (TIGER) System, in which 10,000,000 census blocks' boundaries are digitally encoded (to six decimal places) on computer tape. The boundaries of approximately 16,000 local education agencies, plus such education-related geographic entities as special education districts, Indian reservations and military installations which have education activities within their boundaries, will be similarly digitized and encoded in the TIGER system, thus making it possible to convert the data from census blocks to education entities and produce requested tabulations. Preliminary plans are for the production of approximately 160 tables for each of the 16,000 education entities.

A small number of these tabulations will be reported to the Congress as mandated in Public Law 100-297, on April 1, 1993. After delivery of the report to Congress, the data will be used by the Department of Education for the allocation of various Federal grant programs such as Chapter 1. The National Center will mine this very rich data base to produce a series of analytic publications, and the data will be provided to the States and to education researchers for research and analysis.

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National Cooperative Education Statistics System

National Forum on Education Statistics:

The National Cooperative Education Statistics System (NCESS) is a voluntary Federal-State effort which was mandated by the Hawkins Stafford Education Improvement Amendments of 1988 (Public Law 100-297) to "produce and maintain, with the cooperation of the States, comparable and uniform educational information and data." To assist in meeting this goal, NCES has established the National Forum on Education Statistics to collaborate with the Commissioner of Education Statistics, State education agencies, and other agencies and organizations in their efforts to improve the collection, reporting and use of elementary and secondary education data. Forum members will be Federal and State education officials whose agencies are directly involved in the collection and reporting of education data through the cooperative system.

The Forum will serve as a vital resource to the Commissioner in the development of the Cooperative System and the improvement of a nationwide elementary and secondary database. It will be an arena where Federal and State education officials and others in the education community can come together and discuss the issues, address problems, and develop new approaches. In some cases, the Forum will respond to requests from the Commissioner to address a particular issue or set of issues; in other cases, the Forum will bring forward issues and recommendations of its own. Thus, the Forum will play a major role in the creation of a truly cooperative and efficient elementary and secondary education statistics system, one that provides the Federal Government, the States, school districts, and educators with the information they need to foster excellence in our Nation's schools.

State Personnel Exchange:

The State personnel exchange is a federally funded program that encourages States to help one another. In many situations, a problem in one State has already been solved in another. The personnel exchange supports travel costs for State employees to review the methods or solutions used by other States. This enables State agencies to seek advice from their peers rather than consultants who may be less familiar with State-operating procedures in a particular area. In another use of the personnel exchange, a State may request personnel from one or more States to conduct a review of its management information system. In this situation, a team of experts from several States visits the State agency, reviews operations, and makes recommendations to the chief executive officer of the education agency involved.

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Plans for Elementary and Secondary Education:

The major elementary/secondary surveys of NCES -- the Common Core of Data (CCD), and the Schools and Staffing Survey (SASS), will continue to be carried out by NCES. (See the time line at the end of this chapter.) Additionally, topical supplements may be attached to these surveys so that current data on key issues can be produced.

A new innovation for the CCD survey is the redesign and expansion of the of the fiscal component. Beginning in March 1990, "the National Public Education Financial Survey" greatly expands State-level reporting of public elementary and secondary education revenues and expenditures. In September 1990, NCES is proposing a joint school district fiscal collection with the U.S. Bureau of the Census. Using State administrative records, data will be collected on the universe of some 16,000 school districts, using a slight modification of the existing Census "Survey of Local Government Finances." These data would be combined, before release, with community characteristics from the decennial census. The collection of school district fiscal data would be repeated in 1991 on a sample, rather than a universe, basis. NCES is proposing a major expansion of the Census local government survey in September, 1992. This ambitious collection effort would add about 27 revenue and expenditure items to the 1992 school district universe collection, and would include program expenditures for the first time. Consensus-building steps used for the State-level CCD survey, such as having items reviewed by State, education association, and academic task forces, will also be followed for the joint NCES-Census school district collection.

Under the umbrella of the National Cooperative Education Statistics System, all States have agreed to work toward making their current education data collections comparable with one another and uniform with national standards. A proposed component for CCD is the collection of national dropout statistics. States vary considerably in the ways in which they define a dropout, the timing and the subpopulations for which they collect dropout statistics, and the manner in which they compute dropout rates. Over the past three years, States have worked with NCES to develop standard definitions and procedures for a number of statistics. Some 31 States and other educational agencies have requested inclusion in a field test of procedures proposed to collect comparable and uniform dropout statistics. This field test is required to determine how effectively States can apply the proposed dropout definition; and whether they can collect data following the timeline and procedures prescribed by NCES. Should the field tested procedures prove efficient, they would be implemented in all States and school districts in the Nation.

In the 1991 Schools and Staffing Survey (SASS), the Common Core of Data (CCD) and the NCES Private School Universe, will be used for drawing the public and private school samples, respectively. In order to draw samples that overlap with the 1988 samples, an operation to match Quality Education Data (QED) to CCD will be undertaken to ensure consistency in sampling units.

SASS data from the first cycle are now in the final stages of processing. Making SASS data readily available to both policymakers and researchers is a priority of NCES. Consequently, a dissemination strategy has been developed to serve the needs of both the research and policy-making communities. The dissemination strategy has several objectives: 1) to serve legislated requirements to provide information on the condition of education in the United States, particularly with regard to the supply and demand of teachers; 2) to provide data of planning

interest to policymakers at all levels of government and the education community; and 3) to supply data of research interest to the widest possible audience. This dissemination strategy was developed in advance to facilitate use of the data as soon as they become available.

Primary analysis of the SASS data is planned and carried out by NCES analysts. From research and policy questions identified in planning the data collection, a comprehensive analysis plan was developed and implemented. This plan specifies hard-copy products, such as cross-tabulations of key areas of interest, general descriptive reports, and statistical reports on special topics. In addition, microdata tapes, edited to avoid disclosing identities of individual respondents, will also be released to the public.

Two new undertakings of NCES at the elementary and secondary levels will center on the 1989-90 Private School Survey, and on the National Household Education Survey (NHES). These plans are discussed in the body of this chapter.

Selected Publications and Tabulations:

- Background and Experience Characteristics of Public and Private School Teachers: 1984- 1985) (October, 1988)
- Directory of Public Elementary/Secondary Education Agencies, Spring 1988 (March, 1989)
- E.D. Tabs: Characteristics of Public Elementary and Secondary Schools in the United States, 1986-87 (May, 1988)
- E.D. Tabs: Characteristics of the 25 Most Populous Cities' City School Systems and the 25 Largest Public Elementary and Secondary School Districts, 1986 (September, 1988)
- E.D. Tabs: Public Agency Universe, 1986-87 Final Tabulations (April, 1988)
- E.D. Tabs: Public Elementary and Secondary Education Agencies in the United States: 1987-88 Final Tabulations (November, 1988)
- E.D. Tabs: Public Elementary and Secondary School Membership, Graduates and Staff, by State 1987-88 (Final Tabulations) (November, 1988)
- E.D. Tabs: Public Elementary and Secondary School Revenues and Current Expenditures for Fiscal Year 1987, 1986-87 school year (Final Tabulations) and Fiscal Year 1988 (Revised Final Tabulations) (November, 1988)
- Early Estimates: Key Statistics for Public Elementary and Secondary Education: School Year 1988-89 (December, 1988)
- Early Estimates: Key Statistics for Private Elementary and Secondary Education: School Year 1988-89 (December, 1988)
- FRSS: Education Partnerships in Public Elementary and Secondary Schools (February, 1989)
- FRSS: Public High School Principals' Perceptions of Academic Reform (May, 1988)
- FRSS: Public School Teacher Perspectives on School Discipline (November, 1987)
- FRSS: Public School District Policies and Practices in Selected Aspects of Arts and Humanities Instruction (May, 1988)
- FRSS: Services and Resources for Young Adults in Public Libraries (July, 1988)
- FRSS: State Efforts in Substance Abuse Education (December, 1987)
- FRSS: State Policies Concerning Vocational Education (November, 1988)
- Moonlighting among Public School Teachers (December, 1988)
- Revenues and Expenditures for Public Elementary and Secondary Education (Annual)
- Salary Structures for Public School Teachers, 1984-85 (June, 1988)
- Schools and Staffing Pretest Methodology Analysis (December, 1988)
- Secondary School Teacher's Opinions: Public and Private (September, 1988)
- State Comparisons: Key Statistics on Public Elementary and Secondary Education (November, 1988)
- Statistics of Public Elementary and Secondary School Systems (Annual)
- Targeted Forecasts: Public Classroom Teachers (April, 1988)
- Targeted Forecasts: Public Elementary and Secondary Current Expenditures (April, 1988)
- Targeted Forecast: Public Elementary/Secondary Enrollment (April, 1988)
- Targeted Forecast: Public High School Graduates (April, 1988)
- Teacher Compensation: A Comparison of Public and Private School Teachers, 1984-1986 (March, 1989)
- Teacher Incentive Programs in Public Schools (April, 1989)

Time Allocation Patterns of Teachers in Public and Private Schools: 1984-86 (July, 1989)
Trends in Real Public Elementary and Secondary Revenues, 1981-82 to 1985-86 (September, 1988)
What Teachers Majored In: Bachelor's Degree Fields of Public and Private School Teachers (May, 1989)

Elementary and Secondary Education

Surveys

Common Core of Data

Year of Data Collection

	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>The Public School Universe</i>	X	X	X	X	X	X	X	X	X
<i>Local Education</i>	X	X	X	X	X	X	X	X	X
<i>State Aggregate Non-Fiscal</i>	X	X	X	X	X	X	X	X	X
<i>State Aggregate Fiscal Report</i>	X	X	X	X	X	X	X	X	X
<i>Early Estimates</i>	X	X	X	X	X	X	X	X	X

Schools and Staffing Survey

Year of Data Collection

	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>Teacher Demand and Shortage Questionnaire</i>	X			X		X		X	
<i>School Questionnaire</i>	X			X		X		X	
<i>School Administrator Questionnaire</i>	X			X		X		X	
<i>Teacher Questionnaire</i>	X			X		X		X	
<i>Teacher Follow up Survey</i>		X			X		X		X

**Private
School Studies**

Year of Data Collection

1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990
X			X			X		X		X

Postsecondary Education

Social, demographic, educational, and economic issues challenge postsecondary education today. Among the most critical are questions pertaining to access to postsecondary education for various populations, the effects of shifting enrollment patterns, the cost of postsecondary education, student financing of postsecondary education, education outcomes, the long range financial outlook for colleges and universities, demand for and the supply of qualified faculty and staff, and job opportunities for graduates.

The NCES program in postsecondary education provides statistical information used by planners, policymakers, and educators in addressing these issues. One major source of this information is the Integrated Postsecondary Education Data System (IPEDS), an annual series of surveys conducted by NCES, that provides a variety of data on the Nation's 12,000 public and private postsecondary institutions. Complementing IPEDS are special studies of recent college graduates, student financial aid, postsecondary faculty, and doctorates. A postsecondary longitudinal survey system is being implemented to collect institutional data from postsecondary students over a period of years.

Data Uses:

The NCES higher education data systems provide such information as trends in the enrollment and degree completion of women and minorities; patterns of expenditures and revenues of institutions; patterns of student financial aid; workload of faculty; and the relationship between educational experience and labor market outcomes. These data are used to describe the condition of postsecondary education, and to monitor any changes. Federal program staff have used IPEDS and student aid survey data to address policy issues on financial aid programs. Policymakers at the State level have used IPEDS data for planning purposes. Government commissions have used these data to monitor compliance with Federal legislation.

Thousands of requests for information, based on the Integrated Postsecondary Education Data System (IPEDS), and other postsecondary programs, are received by the Center each year. Those requesting data fall roughly into 6 categories: 1) Federal agencies and officials; 2) State agencies and officials; 3) education associations; 4) individual institutions; 5) the media; 6) the general public. The specifics below illustrate the range of these requests.

Members of the Executive branch, Congress or Congressional committees and a number of federal agencies request information from the Center on a regular basis. For example, an office of the executive branch requested information on land-grant colleges, and the latest degree figures by field; a United States Senator sought information on the projected number of teachers graduating from college; and a Federal government agency requested information about the number of students graduating from college.

Researchers, planners, and educational organizations frequently use NCES postsecondary data. A university researcher requested information on the trends in degrees in law, medicine

and business; a non-profit organization sought data on the number of bachelor degrees received by black men and women; and an educational association needed data on federal funds for higher education.

Businesses also request information. A communications corporation was interested in the trend in doctorates in mathematics; another large organization asked for data on engineering and mathematics graduates; while a New York City firm requested a listing of schools offering masters and doctoral degrees.

The media make frequent requests for NCES data. One newspaper asked for data on recent trends in enrollments in public 2-year colleges. Another daily requested enrollment figures for professional schools; a news magazine wanted to know the number of college students 25 years and older; and a national news program asked for the percentage of bachelors' degrees earned by women.

Surveys and Studies:

Integrated Postsecondary Education Data System:

NCES has established the Integrated Postsecondary Education Data System (IPEDS) as its core postsecondary education data collection program. It is a single, comprehensive system that encompasses all identified institutions whose primary purpose is to provide postsecondary education. IPEDS supersedes the Higher Education General Information Survey (HEGIS). That survey collected data from 1965-1986 from the universe of institutions that were accredited by an accrediting organization recognized by the Secretary of Education.

DESIGN:

In designing and implementing IPEDS, a significant effort has been made to maintain continuity with the HEGIS data series. That is, IPEDS is based on the HEGIS model in that institution level data are collected either directly from the institution or through a central, State coordinating office. All HEGIS institutions are included in IPEDS. However, IPEDS also includes non-accredited institutions of postsecondary education as well as proprietary institutions; institutions not found in the HEGIS database. As a result, IPEDS includes approximately 12,000 postsecondary institutions whereas only approximately 3,500 accredited colleges and universities were included in HEGIS. (Accreditation is not a requirement for inclusion in IPEDS as was the case with HEGIS; rather accreditation is a characteristic of institutions in IPEDS.)

IPEDS defines postsecondary education as the provision of formal instructional programs whose curriculum is designed primarily for students who have completed the requirements for a high school diploma or its equivalent. This is to include programs whose purpose is academic, vocational and continuing professional education, and to exclude avocational and adult basic education programs. Additionally, IPEDS includes the following institutions: baccalaureate or higher institutions, two-year award institutions, and less than 2 year institutions (i.e., institutions whose awards usually result in terminal occupational awards, or are creditable toward a formal two-year or higher award). Each of these three categories are further disaggregated by control (public, private nonprofit and private for profit) resulting in 9 institutional categories or sectors.

IPEDS employs several new concepts in the collection of postsecondary institutional education data. Data element definitions are both A) relevant to all providers of postsecondary education, and B) consistent among components of the system that have been formulated and tested. A set of data elements have been established to identify characteristics common to all providers of postsecondary education. Specific data elements have been established to define unique characteristics of different types of providers of postsecondary education. Relationships and dependencies among several components of IPEDS have been established to avoid duplicative reporting and enhance the policy relevance and analytic potential of the data. IPEDS has also recognized the problems involved in trying to make inter-State and inter-institutional comparisons using the NCES postsecondary data and has addressed many of these problems

through the use of clarifying questions - questions that ask what was or was not included in a reported count or total. Finally, specialized but compatible reporting formats have been developed for the different sectors of postsecondary education providers. In general, the reports developed for postsecondary institutions granting baccalaureate and higher degrees are the most extensive; forms for the 2-year, and less-than-2-year award granting sectors request less data. This design feature would accommodate the varied operating characteristics, program offerings, and reporting capabilities which differentiate postsecondary institutional sectors while, at the same time, yielding comparable statistics for some common parameters for all postsecondary sectors.

IPEDS has been designed to produce representative data at the national, State, and institutional levels. Its data are drawn from the universe of postsecondary institutions.

COMPONENTS:

The components of IPEDS are described below.

Institutional Characteristics:

Address; Congressional district; county; telephone number;
year established; tuition; control or affiliation; calendar
system; highest degrees offered; type of programs;
and accreditation.

Total Institutional Activity:

Collects the data needed to compute a standardized,
full-time equivalent (FTE) enrollment statistic for the entire
academic year. The FTE measure is useful for gauging
the size of the educational enterprise
at the institution.

Fall Enrollment:

Full- and part-time enrollment for men and women undergraduates;
first professional degree students, graduate,
and unclassified students; Racial/ethnic data are collected
in even-numbered years. Beginning in 1990, racial/ethnic
data will be collected annually.
Age distributions are collected in odd numbered years.

**Fall Enrollments in
Occupationally-
Specific Programs:**

Enrollments in occupationally-specific programs, by sex.

**Residence of
First-Time Students:**

First-time, degree-seeking student enrollment classified
by residence status (in-State/out-of-State/foreign),
by level of enrollment.

Completions:

First professional degrees, by field; bachelor's,
master's, and doctor's degrees, by disciplines; and
associate degrees and other formal awards based on
less than 4 years of work beyond high school. Degree
data by sex are collected on an annual basis. Racial/
ethnic data are collected in odd-numbered years.
This will change to an annual collection in 1990.

**Salaries, Tenure, and Fringe
Benefits of Full-time
Instructional Faculty:**

Number of full-time instructional faculty by rank,
sex, tenure status, and length of contract; salaries
and fringe benefits of full-time instructional faculty.

**Financial
Statistics:**

Current fund revenues by source (e.g., tuition and fees,
government, private gifts); current fund expenditures
by function (e.g., instruction, research, plant
maintenance and operation); physical plant
assets and indebtedness; and endowment investments.

**College and
University
Libraries:**

Name, address, and telephone number; number and salaries of full- and part-time staff, by sex and position; circulation and interlibrary loan transactions; book and media collections; hours and days of service; operating expenditures by purpose.

Early Estimates:

Provides estimates during the same semester (i.e., fall) that data are collected on enrollment, degrees, and finance.

POLICY AND RESEARCH ISSUES:

IPEDS provides a wealth of institutional-level data for analyzing the state of postsecondary education institutions. For example, IPEDS data can be used (with HEGIS data) to describe long-term trends in postsecondary education. IPEDS also supplies the data necessary for conducting and interpreting special studies of postsecondary students, faculty, staff and other individuals and elements of postsecondary education. Using IPEDS data, policymakers and researchers can analyze data on a host of issues related to postsecondary educational issues: the number of enrollments, graduates, finance, first-time freshmen, graduate and professional students by race/ethnicity, and sex; the status of postsecondary vocational education programs; the number of individuals trained in certain fields, by sex, race/ethnicity and level; the resources generated by postsecondary education; completions by type of program, level of award, race/ethnicity, and sex; the level of compliance with government regulations, and many other issues of interest.

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Recent College Graduates Study:

The General Provisions Act, 20USC 1221e-1, Section 406(b)(5) states that NCES shall "conduct a continuing survey...to determine the demands for the availability of qualified teachers...in critical areas within education." The Recent College Graduates Study (RCG), indicates the supply of potential teachers. It is a study of the immediate post-degree employment and education experiences of persons who obtained a bachelor's or master's degree from an American college or university, with a heavy emphasis on those graduates qualified to teach at the elementary or secondary levels.

The supply of new teachers and the demand for their teaching services has changed dramatically over the past two decades. Because the RCG sends signals of possible pending teacher shortages, the data from this survey are of interest not only to Federal policymakers, but to many elementary and secondary schools throughout the country, as well.

DESIGN:

The RCG has been conducted periodically since 1976, the latest being in 1987. The next survey is scheduled for 1991. A two-stage sampling design was used for the 1987 RCG study, and will be used for the 1991 study. The first-stage produced a random sample of 400 hundred degree-granting institutions. Institutions were selected with probability proportionate to size, with the size measure based on the sum of bachelor's and master's degrees awarded. This sample was produced from a sampling frame based on the 1983-84 survey of earned degrees (a component of HEGIS). The sampling frame was comprised of the 1,867 institutions that granted bachelor's or master's degrees between July 1, 1983 and June 30, 1984. Institutions in the frame were stratified by: 1) type of control (Public or private); and 2) number of degrees awarded in education (educational vs. non-educational). Institutions were considered "educational" if 1) at least 100 hundred of the bachelor's degrees granted were in education, or 2) if at least half of the bachelor's and master's degrees granted were in education.

The second component of the design of the 1987 RCG survey called for the selection of a sample of 18,000 graduates (16,000 bachelor's degree recipients and 2,000 master's degree recipients) from the 400 sampled institutions that granted bachelor's or master's degrees during the 1985-86 academic year. The target population consisted of all persons receiving bachelor's or master's degrees between July 1, 1985 and June 30, 1986 from an American college or university. Simple random samples of graduates were selected from each defined subgroup (i.e. by field of study). This sampling procedure spread the graduates to be included in the sample across institutions in proportion to the institution's number of graduates. Graduates who were newly qualified to teach were oversampled so as to obtain accurate results for that subgroup. New graduates are sampled one year after receiving their degrees.

This core sample was subsequently augmented to include two groups: 1) 3,400 additional bachelor's degree recipients in nursing (BSNs), and 2) 1,000 additional bachelor's and master's degree recipients from major field of study likely to provide bilingual education teachers. Both of these supplemental samples were selected within the same 400 institutions as the core graduate

samples.

The RCG studies were designed to meet certain objectives: A) to determine how many graduates become eligible or qualified to teach for the first time, and how many were employed as teachers in the year following graduation, by selected field of specialization; B) to obtain reliable and objective information regarding types and patterns of courses taken by major field of study; C) to examine the relationship between courses taken, student achievement, and occupational outcomes.

Data from the RCG survey are representative at the national level. Its sample is drawn from the universe of students within one year of college graduation.

COMPONENTS:

The following summary specifies the data collected.

Recent College Graduates:

Date of graduation; field of study; graduates newly qualified to teach; further enrollment; financial aid; employment status (especially teacher employment characteristics); job characteristics and earnings; city and State of residence; age; marital status; sex and racial/ethnic origins.

POLICY AND RESEARCH ISSUES:

The RCG studies can be used to obtain data on: A) the number and percent of graduates who are qualified to teach, and enter the teaching profession; B) the kinds of jobs recent college graduates are getting by program area or major field; C) the extent to which graduates get jobs in the area of their major field; D) the extent to which jobs differ for men and women who graduate in the same program or major field; E) unemployment of graduates; F) jobs obtained by baccalaureate or master's degree recipients that do not require a four-year college degree.

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National Postsecondary Student Aid Study

The U.S. Department of Education provides some type of financial assistance to about one in every three students attending a postsecondary institution, and spends more than \$8 billion annually in this effort. Yet, until recently relatively little information was available about students who benefit from Federal aid, how financial aid is distributed, or the effects of financial aid on students who receive aid.

The National Postsecondary Student Aid Study (NPSAS) is the most comprehensive nationwide study of how students and their families pay for postsecondary education. It includes nationally representative samples of undergraduates, graduates, and first-professional students; students attending less-than-2-year institutions, 2-3 year schools, 4-year colleges, and universities. Students who receive financial aid as well as those who do not receive aid, and a sample of their parents participate in NPSAS. Results of the study are used to help determine future Federal policy regarding student financial aid. The National Center for Education Statistics conducts the study every three years.

The first NPSAS was conducted during the 1986-87 school year. Data were gathered from institutional records on about 60,000 students at 1,100 colleges, universities, and other postsecondary institutions. About 43,000 of these students and 13,000 parents also completed a questionnaire. These data provided information on the cost of postsecondary education, the distribution of financial aid, and the characteristics of both aided and nonaided students and their families. Three major reports, *Undergraduate Financing of Postsecondary Education*, *Student Financing of Graduate and Professional Education*, and *Profile of Undergraduates in American Postsecondary Institutions*.

DESIGN:

The design for the NPSAS sample in 1987 and 1990 involved three stages of sampling: area sampling, institution sampling, and student sampling. Area sampling was necessary to ensure coverage of all institutional segments through the development of a data file of all postsecondary institutions within sampled areas. An IPEDS/HEGIS and Pell/Campus-based files were merged to produce a national frame of postsecondary schools. From this, zip codes were used to develop primary sampling units (PSU's). PSU's were then stratified by State. The PSU's were sorted within State based on institutional enrollment. With the exception of four States, each State contained at least one PSU. The same 120 PSU's selected in the 1987 NPSAS were used in the 1990 NPSAS. For the 1990 NPSAS, Puerto Rico was also included as a PSU.

Within PSUs, institutions were sampled. To be eligible for inclusion in the institutional sample, an institution must have satisfied the following conditions: 1) offered an education program designed for persons who have completed secondary education; 2) offered an academic, occupational, or vocational program of study; 3) offered access to persons other than those employed by the institution; 4) offered more than just correspondence courses; 5) offered at least one program lasting three months or longer; and 6) was located in the 50 States or the District

of Columbia (Puerto Rico was included in 1990). From the sampled institutions, 1,074 schools participated in 1987; and about 1,130 participated in 1990. The 1990 NPSAS sample included 70,000 students and 27,000 parents.

NPSAS data come from multiple sources, including institutional records, and student and parent interviews. Detailed data concerning participation in student financial aid programs were extracted from school records. In 1987, family circumstances, background demographic data, and plans and aspirations were collected using student and parent questionnaires. For the 1990 NPSAS, student and parent data were collected using a computer assisted telephone interview.

The 1987 NPSAS included an out-of-school component which identified the number of years out of school, and repayment status.

Unlike the 1987 NPSAS, which sampled students enrolled in the fall of 1986, the 1990 NPSAS sample will include about 10,000 students who were enrolled during the 1989-90 school year, at times other than the fall. This design change will provide the data necessary to estimate full-year financial aid awards.

COMPONENTS:

Student Record Abstract (from institutional records):

Year in school; major field of study; type and control of institution; financial aid; cost of attendance; grade point average; age; sex; race/ethnicity; marital status; income; employment and salary.

Student Interview:

Level; major field of study; financial aid; cost of attendance; reasons for selecting the school they are attending; current marital status; highest degree expected; employment and income; community service.

Parent Survey:

Parents' race/ethnicity; marital status; age; highest level of education achieved; income; amount of financial support provided to children; types of financing used to pay child's educational expenses; occupation and industry.

**The Out-of-School
Student Loan
Recipient Survey (1987-1988):**

Major field of study; years attended and degrees received (if any); type and control of institution; financial aid; repayment status; age; sex; race/ethnicity; marital status; income; and employment history (occupation, industry, and salary).

POLICY AND RESEARCH ISSUES:

NPSAS covers a number of topics of interest to policymakers, educators and researchers. For example, NPSAS analyzes the participation of students in financial aid programs. The goal is to identify institutions, students, family, and other characteristics related to program participation. Also analyzed is special population enrollment in postsecondary education. These include students with handicaps, racial and ethnic minorities, remedial students, disadvantaged students, and older students. Another component of NPSAS is the study of the distribution of students by major field of study. Of particular interest are mathematics, science, engineering, as well as teacher preparation and health studies. NPSAS generates data on factors associated with choice of postsecondary institution, participation in postsecondary vocational education, parental support for postsecondary education, and occupational and educational aspirations and plans of those involved with postsecondary education.

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National Survey of Postsecondary Faculty:

The quality of education is directly affected by faculty and instructors in postsecondary education institutions. However, there has been little comprehensive current information on this professional body, and the major issues which face them as educators, researchers, and members of the work force.

To remedy this situation, the National Survey of Postsecondary Faculty (NSOPF) was conducted. This study, which was cosponsored by the National Endowment for the Humanities, was designed to provide reliable and current data in a variety of areas for postsecondary education researchers, as well as planners and policymakers. NSOPF is the most comprehensive study of faculty in postsecondary educational institutions ever undertaken.

DESIGN:

The NSOPF is a comprehensive survey of postsecondary instructional faculty that was conducted by NCES for the first time in the 1987-88 academic year. There were three major components of the study: a survey of institutional-level respondents at a stratified random sample of 480 institutions; a survey of a stratified random sample of 11,013 eligible faculty members within the participating institutions; and a survey of a stratified random sample of 3,029 eligible department chairpersons (or their equivalent) within the participating two- and four-year institutions. Response rates to the three surveys were 88 percent, 76 percent, and 80 percent respectively.

The universe from which the institutions were selected were all nonproprietary U.S. postsecondary institutions that grant a two-year (A.A.) or higher degree, and whose accreditation at the higher education level are recognized by the U.S. Department of Education. This includes religious, medical, and other specialized postsecondary institutions, as well as two- and four-year non-specialized institutions. According to the 1987 Integrated Postsecondary Education Data System (IPEDS), this universe comprised 3,159 institutions.

The 1988 NSOPF gathered information regarding the backgrounds, responsibilities, workloads, salaries, benefits, and attitudes of both full- and part-time faculty in their postsecondary institutions. In addition, information was gathered from institutional and department-level respondents on such issues as faculty composition and turnover and recruitment, retention, and tenure policies. The survey will be repeated in the 1991-92 academic year so that changes over time in institutional policies with regard to faculty characteristics, behaviors, and attitudes can be assessed.

COMPONENTS:

Institutional Survey:

Counts of faculty by rank; faculty hires and departures; tenure of faculty; tenure policies; benefits for faculty, including retirement benefits.

Department Chair Survey:

Faculty composition in department; tenure of faculty in department; tenure policies; rank; gender, and minority/nonminority status of faculty in department; faculty hires and departures in department; hiring practices; activities to assess teacher performance; professional and developmental activities.

Faculty Survey:

Sociodemographic characteristics; academic and professional background; field of teaching; employment history; current employment status including rank and tenure; outside employment; workload; courses taught; job satisfaction and attitudes; career and retirement plans; benefits and compensations.

POLICY AND RESEARCH ISSUES:

The NSOPF contains data which can be applied to policy and research issues related to postsecondary faculty. For example, NSOPF can be used to analyze if the postsecondary labor force is declining or increasing. NSOPF data can also be used to analyze faculty job satisfaction and how it correlates with an area of specialization; how background and specialization skills relate to present assignments. Comparisons can be made on academic rank and outside employment. Benefits and compensations can also be studied across institutions, and faculty can be aggregated by sociodemographic characteristics.

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Survey of Earned Doctorates Awarded in the United States:

This survey has collected basic statistics from the universe of doctoral recipients in the United States each year since the 1920s. It has been supported by 5 Federal agencies: The National Center for Education Statistics in conjunction with the National Science Foundation, and the National Endowment for the Humanities, the United States Department of Agriculture, and the National Institute of Health.

DESIGN:

Survey forms are mailed to graduate deans each May for distribution to individuals receiving their doctorates between July 1 and June 30th of the next year. The data are collected, edited, and published by the National Academy of Sciences (NAS). By the end of the summer, the NAS publishes general survey results in a **Summary Report** and in a 4-page flyer. Detailed tabulations are also provided to each sponsoring agency by NAS. This on-going survey is designed to produce representative data at the national level. It draws data from the universe of all doctoral degree recipients.

COMPONENTS:

Survey of Earned Doctorates:

Sex; age; race/ethnicity; marital status; citizenship;
handicaps; dependents; specialty field of doctorate;
all institutions attended from high school to completion
of doctorate; time spent in completion of doctorate;
source of financial support for graduate study;
educational debt incurred; postgraduation plans;
educational attainment of parents.

POLICY AND RESEARCH ISSUES:

From the Survey of Earned Doctorates data, it is possible to determine whether the number of doctoral recipients is growing or decreasing, by field of study. The various sources of financial aid for doctoral students can be assessed, as can the average time it takes to complete the degree. Future or present employment can be studied, which could be very useful information for postsecondary institutions and research facilities. Analyzing who is receiving doctorates, by sex and race/ethnicity can also be useful in determining trends over time.

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Plans for Postsecondary Education:

Plans for IPEDS include a number of ongoing activities, as well as a number of new projects. Specifically, NCES will continue surveys of all IPEDS components, including the Early Estimates System and an IPEDS workshop program for State and institutional representatives. Throughout, IPEDS will provide a sampling frame of postsecondary education institutions required for almost all special postsecondary surveys such as the Recent College Graduates Survey and the National Postsecondary Student Aid Study. NCES will implement the Postsecondary Fast Response Survey System to collect data for addressing emerging and focused issues that the ongoing data collection systems are unable to provide.

Other plans call for NPSAS to serve as the base for two new postsecondary longitudinal surveys: Beginning Postsecondary Students, and Baccalaureate and Beyond. The Beginning Postsecondary Students survey will produce data on a cohort of students beginning postsecondary education. This cohort will be followed through the postsecondary education system and beyond. The progress of the cohort as it completes (or fails to complete) postsecondary education, and moves into the work force will be analyzed. Baccalaureate and Beyond will study the educational and work-related achievement of a postsecondary graduating cohort as they continue on into graduate or professional education, or enter the work force. Since these new studies are longitudinal in scope, they are discussed at length in the "Plans" section of Chapter 5 - Longitudinal Studies.

Selected Publications, Tabulations, and Tapes:

- A Comparison of Bachelor's and Master's Degree Recipients (September, 1989)
The American Indian in Higher Education (March, 1987)
Approaches to Drug Abuse Prevention at Colleges and Universities (October, 1988)
Data Tape: Fall Enrollment in Postsecondary Institutions, 1986 (June, 1988)
Data Tape: Institutional Characteristics of Postsecondary Institutions (September, 1988)
Data Tape: National Postsecondary Student Aid Study, 1987 (June, 1988)
Data Tape: Postsecondary Education Transcript Data for 1980 Sophomores in the High School and Beyond Study (September, 1988)
Data Tape: Residence of First-Time Students in Higher Education (April, 1988)
Descriptive Report of Academic Departments in Higher Education Institutions (January, 1990)
Directory of Postsecondary Institutions, Volumes 1 and 2 (November, 1988)
Earned Degrees Conferred (March, 1989)
E.D. Tabs: 1986 Fall Enrollments in Postsecondary Institutions (August, 1988)
Enrollment in Postsecondary Education by 1980 and 1982 High School Graduates (October 1988)
Faculty in Higher Education: NSOPF 1988 (February, 1990)
Fall Enrollment in Postsecondary Institutions: National Estimates for Fall 1987 & Reported Data for Fall 1986 (October, 1988)
Institutional Policies and Practices Regarding Faculty in Higher Education (January, 1990)
Integrated Postsecondary Education Data System Glossary (February, 1987)
Less-Than-4-Year Awards in Institutions of Higher Education (August, 1987)
National Estimates of Higher Education Statistics: 1988 (December, 1988)
New Teachers in the Job Market — 1988 Update (March, 1990)
NPSAS: Undergraduate Financing of Postsecondary Education: A Report of the 1987 NPSAS Study (May, 1988)
Occupational and Educational Outcomes of 1985-86 Bachelor's Degree Recipients (August, 1989)
Occupational and Educational Consequences of a Baccalaureate Degree (March, 1987)
Postsecondary Institutions Offering Vocational/Technical Programs : Findings From HS&B (1980-1986) (September, 1989)
Profiles of Education Doctorates, 1976-86 (December, 1987)
Profiles of Handicapped Students in Postsecondary Education, 1987 (June, 1989)
Residence of First-Time Students, 1986-87 (June, 1988)
State Higher Education Profiles (October, 1988)
Student Financing of Graduate and Professional Education: A Report of the 1987 National Postsecondary Student Aid Study (March, 1989)
Summary of Graduate Education Fellowships and Assistance Programs and Funded Institutions (June, 1989)

Targeted Forecast: Earned Degrees Conferred (National) (April, 1988)
Targeted Forecast: Higher Education Enrollment (National) (April, 1988)
Trends in Minority Enrollment in Higher Education, 1976-1986 (April, 1988)
Trends in Bachelor's and Higher Degrees, 1975-85 (August, 1988)
Undergraduate Financing of Postsecondary Education: A Report of the 1987 National
Postsecondary Student Aid Study (June, 1988)

Postsecondary Education

Surveys

Integrated Post- Secondary Data

Year of Data Collection

System

	1988	1989	1990	1991	1992	1993	1994	1995	1996
<i>Institutional Characteristics</i>	X	X	X	X	X	X	X	X	X
<i>Total Institutional Activity</i>	X	X	X	X	X	X	X	X	X
<i>Fall Enrollments</i>	X	X	X	X	X	X	X	X	X
<i>Fall Enrollments in Occupationally Specific Programs</i>		X		X		X		X	
<i>Residence of First-Time Students</i>	X		X		X		X		X
<i>Completions</i>	X	X	X	X	X	X	X	X	X
<i>Salaries, Tenure, and Fringe Benefits of Full-time Instructional Faculty</i>		X	X	X	X	X	X	X	X
<i>Financial Statistics</i>	X	X	X	X	X	X	X	X	X
<i>College and University Libraries</i>	X		X		X		X		X

Surveys***Year of Data Collection***

	<i>1987</i>	<i>1988</i>	<i>1989</i>	<i>1990</i>	<i>1991</i>	<i>1992</i>	<i>1993</i>	<i>1994</i>	<i>1995</i>
National Postsecondary Student Aid Study	X			X			X		
Recent College Graduates	X			X					
National Survey of Postsecondary Faculty	X			X			X		
Survey of Earned Doctorates in the United States	X	X	X	X	X	X	X	X	X

Educational Assessments

Assessing the educational outcomes of American students is a major concern of NCES. This is achieved primarily through the National Assessment of Educational Progress (NAEP). For two decades, NAEP has regularly collected and reported information on the knowledge, skills, and attitudes of a national sample of 9-, 13-, and 17-year-olds in a variety of school subjects.

Insights into the educational practices and outcomes of the United States are also obtained by comparing them with other countries. This is achieved through the International Education Statistics program at NCES, which provides systematic statistical data on the educational experiences and trends in other countries. Information comparing the public expenditures for schooling, participation rates of school-age children, and education achievement levels of the various national populations are disseminated in the major reports of NCES.

Another way to study the outcomes of education is to investigate the course of studies that students have taken. Two NCES surveys have collected data on courses of study in high school: the 1982 High School and Beyond (HS&B) transcript study, and the 1987 High School Transcript Study. While transcript studies are a relatively new program at NCES, the information gathered has proven useful enough to continue such studies in the future.

NCES has begun a new program to assess educational outcomes among adults, through the National Adult Literacy Survey, now in its planning stages. NCES is reviewing research literature on the definition of literacy and the concrete specification of the basic skills that comprise it. After the further work needed to move from theoretical concerns to the practical concerns of designing an assessment, NCES plans to conduct a field test, and then in 1992, a full-scale, household-based survey of adults of pre-retirement age, to assess their literacy.

Data Uses:

NAEP data have been employed in numerous ways by researchers, educators, policymakers and the general public. A myriad of researchers have used the results of the NAEP assessment to: describe performance trends in all subject areas, especially basic skills: study achievement in the arts; analyze data on music education, plus a host of other research projects. In short, researchers in almost every field of education have studied the results, analyzed the trends, and derived possible hypotheses from the NAEP results. Researchers, however, are not the only individuals to use the NAEP data. Policymakers have used the results to: accent either the health or malaise of the American educational system. Educators have used the results to develop standards for an improved mathematics and science curricula. Elected officials have used NAEP results to call for educational reform.

NCES receives many requests for information on basic education issues in other countries such as school achievement levels, secondary school dropout rates, school expenditure level, and higher education enrollment rates. Policymakers, such as State Education Chiefs, Governors, and local school officials wish to identify the average level of achievement in other countries. Most

of these requests are for data concerning highly developed countries (e.g., Australia, Canada, England, France, Germany, and Sweden).

High school transcript data have been used for a variety of purposes. In recent years, the educational reform movement has called for more rigorous programs of study in high school. In its 1983 *A Nation at Risk* report, the National Commission on Excellence in Education recommended a specific minimal course of study in high school. In response to this report, NCES analyzed the High School and Beyond (HS&B) transcript study, comparing the course-taking patterns of high school students graduating in 1982 to the curriculum recommended by the Commission. Another paper has related the course-taking patterns of students in 1982 to selected characteristics of their schools. More recently, the 1987 High School Transcript Study was used to compare the course-taking patterns of students in 1987 with similar patterns in 1982, and the National Assessment of Vocational Education (NAVE) conducted extensive analyses of vocational educational enrollments and of course-taking patterns of handicapped high school students.

Surveys and Studies:

National Assessment of Educational Progress:

The National Assessment of Educational Progress (NAEP) was mandated by Congress (GEPA, Section 406) as a program to continuously monitor the knowledge, skills, and performance of the nation's children and youth. According to the legislation, NAEP has been mandated to make objective data about student performance available at the national, and regional levels.

In 1988, Congress amended this legislation, which resulted in a different governance structure, the National Assessment Governing Board (NAGB), a schedule for assessing subjects, and a requirement to conduct a voluntary trial State assessment.

The purpose of the NAGB is to provide policy for the execution of NAEP. The Board is composed of national and local elected officials, chief state school officers, classroom teachers, local school board members and leaders of the business community, among others. Specifically, it has been charged by Congress with the following duties: selecting subject areas to be assessed; identifying appropriate achievement goals for each age group; developing assessment objectives, designing a methodology of assessment, and producing guidelines and standards for national, regional, and State comparisons.

Prior to 1990, NAEP was required to assess reading, mathematics and writing at least once every five years. With the new legislation, NAEP "will assess reading and mathematics at least every two years, science and writing at least every four years, and history/geography "and other subjects selected by the Board" at least every six years.

DESIGN:

NAEP began to collect data in 1969 and has periodically conducted assessments of ages 9, 13, and 17 and grades 4, 8, and 11. The grade structure changed to 4, 8, and 12 beginning with the 1988 cycle. The subject areas assessed have included: reading, writing, mathematics, science, citizenship, U.S. history, geography, social studies, art, music, literature, and career and occupational development. From time to time, NAEP has conducted special assessments in other educational areas such as health, energy, consumer math, and young adult literacy. NAEP has also collected background information from students, teachers, and administrators, and related these data to student achievement.

In 1983, the grantee (who conducted NAEP) changed from the Education Commission of the States to Educational Testing Service. At the same time, a number of changes were made to the design to improve its utility to policymakers. The student samples were expanded to include both age- and grade-representative populations. A variation of matrix sampling (Balanced Incomplete Block spiraling) was begun in packaging and administering assessment booklets. This method was used so that the results from a large number of items can be generalized to an entire

population. Approximately 2,600 students respond to each set of items. Cognitive performance data and non-cognitive data are reported for the nation, and by various groups categorized by variables such as region, sex, and type and size of community. Also initiated in 1983 was the reporting of performance data by scaled proficiency levels (see "scale scores" below).

All questions undergo extensive reviews by subject-area and measurement specialists, as well as careful scrutiny to eliminate any potential bias or lack of sensitivity to particular groups. They are then field tested, revised, and administered to a stratified, multi-stage probability sample. The individuals sampled are selected so that their results may be generalized to the entire country. Once the data have been collected, scored and analyzed, NAEP publishes and disseminates the results.

In recent years, when reporting its results, NAEP has utilized "scale scores". These scores are a device summarizing both the proficiency or level of understanding of a subject, and the nature of that understanding into a single number, reflecting a mean score, with corresponding standard deviation. For example, in mathematics, the levels of proficiency are described as follows: A) Level 150 - Simple arithmetic facts; B) Level 200 - Beginning skills and understanding; C) Level 250 - Basic operations and beginning problem solving; D) Level 300 - Moderately complex procedures and reasoning; E) Level 350 - Multi-step problem solving and algebra.

Over the past three assessment cycles NAEP has developed scales for mathematics, reading, writing and science. In 1988 NAEP developed scales for history and civics, as well. These scales allow NAEP to report comparable results across ages and across assessments. In addition, the scale scores allow NAEP to report the proportion of students at different proficiency levels in the various subject areas. This permits educators, policymakers, and the general public to see the type of skills and knowledge American students demonstrate at different levels of proficiency in a subject area.

Currently NAEP is conducted every other year in even numbered years. In 1988, NAEP assessed student performance in reading, writing, civics, geography, and U.S. history; and in 1990, reading, science, and mathematics will be assessed. In the 1988 assessment, data were collected from a national probability sample of about 35,000 students per age/grade or a total of about 105,000 students in nearly 1,750 schools, as well as their principals and a sample of their teachers.

NAEP has been designed to produce a representative sample at the national level. Representative State-level data will be produced for participating States from the trial State assessment in 1990 for mathematics at the eighth grade level. The sample, since 1988, has been drawn from the universe of 4th, 8th, and 12th graders for the elementary and secondary school students survey; from the teachers of those students for the teacher survey; and from the school administrators at those elementary and secondary schools for the school characteristics and policy survey.

COMPONENTS:

A summary of areas assessed is presented below.

Elementary and Secondary School Students Survey:

Areas assessed include: reading; writing; mathematics; science; citizenship; U.S. history; music; geography; social studies; art; literature; computer competence; and career and occupational development. NAEP also has conducted special assessments in other educational areas such health, energy, consumer math, and young adult literacy.

School Characteristics and Policy Survey:

Data collected about the school include: enrollment; curriculum testing and objective setting practices; school administrative practices; school conditions and facilities; special services and programs. Data collected about the school administrator include: race/ethnicity; sex; undergraduate field of study; years as principal; total school administrative experience; teaching experience.

Teacher Survey:

Data collected about the school include: school curriculum testing and objective setting practices; school administrative practices; conditions and facilities; special services and programs. Data collected about the teacher include classroom instructional practices; race/ethnicity; sex; age; undergraduate field of study; teaching certification; full-time teaching experience; employment status; and subject matter specialization.

POLICY AND RESEARCH ISSUES:

As noted in the "Data Uses" section of this chapter, the number of studies produced by researchers using the NAEP results is extensive. A study group of policymakers was formed by the Secretary of Education in 1986 which examined NAEP. The results of this study group was the publication *The Nation's Report Card*. It stated that policymakers are keenly interested in NAEP student assessment data, because they address the outcomes of education; specifically, the level of educational achievement. It emphasized, however, that NAEP should produce data which are representative not only at the national level, but also at the State level. In response to this recommendation, legislation was enacted to permit NAEP to begin pilot testing NAEP assessments at the State level during 1990. (See the "Plans" section of this chapter for a further explanation.) However, data will not be reported below the state level, since there is a prohibition against the reporting of NAEP data at the district or school level.

In addition to performance results in subject areas, the 1988 data set, now becoming available, contains basic descriptive information about students, teachers, administrators, schools, and communities. This information will be used to address the following four educational policy issues that are of concern to educators, policymakers, and researchers: A) Instructional practice -

What instructional methods are being used and how do these relate to achievement? B) Students-at-risk - How many students appear to be at-risk, and what are their characteristics? C) Teacher work force - What are the characteristics of reading and writing teachers? D) Effective Schools - What, if any, policy changes are being made by our nation's schools?

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International Education Statistics:

The purpose of international statistical studies of education at NCES is to provide the public with reliable information on comparisons of the United States with other countries on such topics as student achievement, school expenditures, school participation rates, and teacher characteristics. Through comparisons with other countries, it is possible to learn more about the status of education in the United States.

The NCES program for international statistics includes activities to: improve the quality and comparability of international statistics relating to education; to assemble in a central location reliable studies of trends in schooling and educational achievement, principally from countries having a comparable level of educational development with the United States; to supply such international organizations as the United Nations Educational Social and Cultural Organization (UNESCO) and the Organization for Economic Cooperation and Development (OECD) with standardized statistics of the United States educational system; and to conduct and report on studies that have been identified as relevant to U.S. concerns and of policy interest.

DESIGN:

Unlike the statistics for population, labor, and health, there are few readily available sources of international statistics about education. No single national or international organization carries out a comprehensive program of statistics on international education comparisons on school characteristics, student participation, student graduation, school finance, teacher characteristics, and student achievement. Thus, NCES plays a central role in coordinating organizations making cross national comparisons and has committed staff and funds for conducting international education studies.

There are currently a number of major NCES projects focusing on international education. First, NCES has established the U.S. Board on International Comparative Studies in Education. It is a national board of eminent scholars who have been selected to discuss U.S. participation in international studies. The purpose of this committee is to insure that future surveys on international education will be conducted as well as possible.

Second, NCES has participated in funding analyses of international assessments: The Second International Mathematics Study (1982), and the Second International Science Study (1985) (both sponsored by the International Association for Evaluation of Educational Achievement, or IEA), the IEA Writing Study (1984), and the International Assessment of Education Progress (1988), and is currently participating in the IEA Reading Literacy Study. Third, NCES is the National Research Center for the 1991 IEA Reading Literacy Study which is a survey of reading achievement and reading activities that will be conducted in about 40 countries. Two populations will be assessed: students in the modal grade for 9- and 14-year-olds. (The modal grade is the grade in which most students of an age group are enrolled. For example, in the U.S., the modal grade for 9- and 14-year-olds is the 4th and 9th grades, respectively.) Reading tests of approximately 110 items will be given covering the ability to read narration, exposition and documents. Four survey instruments will be used to measure student

reading habits, student background and attitudes, teacher practices and training, and school administrator information. The international costs of the IEA Reading Literacy Study, such as meetings for preparing data collection instruments and data processing plans, have also been supported by NCES. In addition, NCES is supporting the second International Assessment of Education Progress (IAEP), a survey of mathematics, science, and geography of students who are 13 years old in 20 countries in 1991.

Fourth, NCES cooperates with the Organization for Economic Cooperation and Development (OECD) to develop better statistics for comparing countries on measures of student outcomes, attitudes, enrollment, school characteristics, and school finance.

NCES' participation in international assessments has been limited to supporting the data analysis of the international data files and the U.S. data collection costs. Each of the science and mathematics projects were jointly funded with the National Science Foundation. An experimental survey of student achievement in science and mathematics for 13-year-olds was conducted in 1988 by the Educational Testing Service (ETS). NCES is now actively involved in cross-national achievement data collection through the IEA Reading Literacy Study and the IAEP. A few of these assessments are discussed here to illuminate how international studies are undertaken.

COMPONENTS:

Second International Mathematics Study:

20 countries with two populations -- eighth grade
and twelfth grade (U.S. equivalent) in 1982;
cognitive tests of 157 items with
arithmetic, algebra, geometry, measurement, and statistics;
opportunity to learn or coverage of curriculum in all countries;
student background and attitudes;
teacher attitudes, practices, and training;
school administrator information.
Country sample size ranged from 1,000 to 8,800 students.

Second International Science Study:

Children in grades five and nine;
and high school grade students in the
terminal grade; those studying advanced biology,
chemistry or physics; and those not
studying science. School characteristics,
teacher practices Carried out in 1985;
24 countries participated; core test of 30 items.

International Assessment of Education Progress (IAEP)

Five countries -- Ireland, Korea, Spain, the United Kingdom, and the United States, and 4 Canadian provinces;
45-minute mathematics assessment consisting of 63 questions and a 45-minute science assessment made up of 60 questions; student attitudes; teachers rated exposure to test concepts.
All countries and provinces followed standardized administration procedures.
Age of students: 13 years old (born January 1, 1974 - December 31, 1974); public and private elementary, middle, and secondary schools;
sample of about 2,000 students from 100 different schools were selected from each country or province.

IEA Reading Literacy Study:

40 countries with two populations — the grades containing nine and fourteen year old students.
Estimates of the frequency of reading; the percentage of students reaching advanced literacy levels; School, teacher, and social factors influencing reading levels.

Second International Assessment of Education Progress:

20 countries;
students at age 13;
achievement levels in science, mathematics, and geography;
fast reporting of results;
sample sizes of about 2,000 students.

POLICY AND RESEARCH ISSUES:

International data sets are used primarily to analyze the performance of American students in a variety of subject-areas related to their counterparts in other countries. These comparative data can be used to analyze relative strengths and weaknesses of American students. Policymakers, researchers and educators can use the data from these assessments to judge not only the achievement levels of American students, but these levels can also be related to reported amounts of homework, and the types of activities taking place in the classroom. Past assessments have emphasized the fields of mathematics and science. As the international assessment program progresses, additional data will become available in other academic fields. (See the "Plans" section of this chapter.)

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High School Transcript Studies:

High school transcript data can inform researchers and policymakers about the course-taking patterns of students. The analysis of course-taking patterns in the Nation has become significant since the educational reform movement started calling for more rigorous programs of study in high school. In its 1983 *A Nation At Risk* report, the National Commission on Excellence in Education recommended a specific minimal course of study in high school. In 1988, the Education Department evaluated the way the Nation responded to the call for school reform (in its report, entitled *American Education: Making It Work*). In its evaluation, the authors compared the *A Nation At Risk* recommended curriculum with the actual course-taking patterns of students in the 1987 High School Transcript Study. Future transcript studies can track changes in the curricular patterns of high school students, using the 1982 High School and Beyond transcript study and the 1987 High School Transcript Study as starting points in a time series.

DESIGN:

The sample of schools for the 1987 High School Transcript Study consisted of 433 public and private high schools that had previously been selected to participate in the 1986 National Assessment of Educational Progress survey of Grade 11/Age 17 students. The study allowed a year to pass since the 1986 NAEP survey so that the students would have time to graduate with complete high school records. In the participating schools, copies of transcripts and related information were obtained in the fall of 1987 for 35,100 students, including 6,900 handicapped students. All information on students came from school staff; no personal contacts were made with students. Therefore, the 1987 High School Transcript Study includes a minimal amount of student information: sex, grade level, age, graduation status, and race/ethnicity. The 1987 High School Transcript Study included a Special Education Student Questionnaire (completed by school staff) that identifies the nature and severity of the handicapping condition for all students with handicaps.

In order to make possible the statistical summarization of a vast diversity of course content in the Nation's schools, the 1987 High School Transcript Study standardized the courses that were listed on the transcripts by classifying each course into a seven-digit code, based on course content and level. The coding system employed was the Classification of Secondary School Courses (CSSC), containing approximately 1,800 course codes. The CSSC is detailed enough that it can distinguish an on-grade-level 10th grade English course from a below-grade-level 10th grade English course. The seventh digit is used to identify courses designed for handicapped students. Course catalogs and other information from the participating schools were used to determine the content and level of courses. For each course on each student's transcript, information on grades earned and credit received was also standardized and transcribed.

NCES has conducted or will conduct several related surveys: in 1987 the school administrators completed a school characteristics and policies questionnaire that asked about course requirements for graduation. The High School and Beyond study includes comparable

high school transcript data for the class of 1982. The National Education Longitudinal Study of 1988 will include comparable high school transcript data for the class of 1992. Further transcript surveys will be part of the National Assessment of Educational Progress, beginning in 1990 or 1992.

COMPONENTS:

The 1987 High School Transcripts study:

Complete high school transcript data on 9th through 12th grades:
courses taken; grades; and credits earned.
Student characteristics: race/ethnicity; sex; age; type and
severity of handicapping condition; a school characteristics
and policies questionnaire that asked about course requirements
for graduation.

POLICY AND RESEARCH ISSUES:

Since the influential report, *A Nation At Risk*, there have been a number of other voices chiming in with demands to strengthen the core curriculum of the high school. Student have been encouraged to increase their academic load with courses in English, mathematics, science, social studies, computers, and foreign languages. Transcript data of the kind collected in the 1987 High School Transcript Study permit policy studies that compare student practices with the urgings of educational reformers. As NCES conducts more transcript studies, overall trends in course taking can be traced.

Transcript data remain unavoidably limited by their nature as measures of exposure, rather than measures of learning. Still, the overall trends in course exposure can reveal much about American education.

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National Adult Literacy Survey, 1992

Literacy assessment informs policymakers about the kinds of basic skills that the adult population possesses that are needed: for literate functioning in society; to achieve one's goals; and to develop one's knowledge and potential. Recently, concern has mounted that inadequacies in the literacy of American workers are reducing the competitiveness of the American economy. The National Adult Literacy Survey will provide an accurate benchmark for measuring the capabilities of working-age adults.

DESIGN:

The National Adult Literacy Survey is likely to follow an approach similar to the 1985 Young Adult Literacy Assessment constructed under the NAEP grant. In that survey, 3,600 young adults ages 21 to 25 were interviewed and assessed along three dimensions of literacy: 1) prose literacy -- the ability to understand and use information from texts that include editorials, news stories, poems, and the like; 2) document literacy -- the ability to locate and use information contained in job applications or payroll forms, bus schedules, maps, tables, indexes, and so forth; and 3) quantitative literacy -- the ability to apply arithmetic operations to numbers embedded in printed materials, such as balancing a checkbook, figuring a tip, completing an order form, or determining the amount of interest from a loan advertisement. The 1985 Young Adult Literacy Assessment also collected background information in order to relate it to levels of literacy.

Because policymakers need to assess a broad range of abilities in the population without needing to diagnose individual problem areas, the assessment was designed to cover a broad range of skills. ~~It would have taken any one individual about two to three hours to complete the entire assessment.~~ In order to keep the burden on any one individual to less than an hour, the assessment was cut into seven pieces, with only three pieces given to any one respondent. The design used balanced incomplete block spiralling to assign systematically the parts of the assessment to individuals in a way that maximizes the information yield and permits generalizing the sample results to the U.S. population. The responses to the items are pooled and reported by scaled proficiency levels on the three dimensions of literacy.

All questions will undergo extensive reviews by subject area and measurement specialists, as well as scrutiny to eliminate any bias or lack of sensitivity to particular groups. They will then be field-tested, revised, and administered to a stratified multi-stage, area-based probability sample. The households and individuals will be sampled with known probabilities, so that the results may be generalized to the entire population. Once the data have been selected, scored, and analyzed, the results will be published, and the data made available to the public.

This is the first national study of adult literacy since the Adult Performance Level surveys of the early 1970s. The authorizing legislation (The Education Amendments of 1988) calls for NCES to report on literacy every four years, so it is possible that this study may become the initial point in an NCES statistical time-series on literacy.

COMPONENTS:

National Adult Literacy Study, 1992:

Areas to be assessed include: prose literacy; document literacy; and quantitative literacy. Other areas assessed include race/ethnicity; age; sex; educational and occupational background; and reading habits.

POLICY AND RESEARCH ISSUES:

There has been a recent wave of concern about the literacy level of the American work force, as described in a number of national reports published since 1980, including *A Nation At Risk*, *Toward a More Perfect Union*, *The Subtle Danger*, *Work force 200*, *The Bottom Line*, and *Literacy: Profiles of America's Young Adults*. These reports have emphasized the need to increase our Nation's standard of literacy in order to maintain our standard of living, and to compete in global markets. But national programs to improve adult skills ought to be based on knowledge about the nature and severity of the deficits in literacy. The role of the National Adult Literacy Survey is to provide the elementary facts needed to begin understanding our Nation's literacy problem.

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Plans for Educational Assessment:

NAEP has been evaluating the performance of students on achievement trends in specific subject areas. These trend lines reflect national performance of students since 1969. However, since the curricula are changing, NAEP must also change. NAEP is currently using a national consensus process to develop test and item specifications for reading in 1992. This consensus process was also used to develop the 1990 mathematics assessment. NAEP is also incorporating new assessment techniques. In 1990, about 2.5 million open-ended items will be scored in connection with the mathematics assessment. In addition, the writing assessment, an assessment consisting totally of open-ended items, will be scored with primary trait, holistic, and writing mechanics scoring procedures. Other new assessment techniques include the use of calculators in the 1990 mathematics assessment, and a special study on the use of timed mathematics items to measure students' ability to estimate the correct answer.

NAEP is a national assessment program; however, in the future, it may also routinely conduct State assessments in cooperation with States that wish to participate. NAEP is planning a voluntary trial assessment at the state level to measure eighth grade mathematics achievement. This trial will collect data in 1990 from 38 participating States, two territories and the District of Columbia. In 1992 NAEP will conduct a trial mathematics assessment for the fourth and eighth grades, as well as a trial reading assessment for the fourth grade. Depending on the outcomes of these trial State assessments, Congress may authorize future NAEP studies at the State level. Throughout, NCES will provide continuing reviews of NAEP through an independent evaluation of the trial State assessment, a NAEP technical review panel, and validation studies. Additionally, NCES will also solicit public comment on the conduct and usefulness of NAEP by holding open meetings across the country.

Plans for international education studies involve NCES working cooperatively with the Organization for Economic Cooperation and Development (OECD) to develop an Indicators Project. NCES has consistently encouraged the development of an international education indicators by OECD. This project will produce a long range work plan that should provide cross national comparisons in education for all OECD member countries for all aspects of education. NCES has the responsibility for chairing the development of a work statement on education outcomes, and it participates in developing work plans for school enrollment, school finance, ecology of schools, and attitudes.

The IEA Writing Study, an examination of written composition was carried out in 15 countries in 1985. This project, at this point, has not been completed, and NCES has expressed an interest in concluding it. Meetings have been proposed to determine if this can be accomplished.

The Educational Testing Service (ETS) in conjunction with NCES, has proposed a second International Assessment of Educational Progress in 1991 for subjects including science, mathematics, and geography. Also assessed will be student background, teacher information, and opportunity to learn. A large number of countries (about 20) have expressed interest in being involved in the study. This project has been discussed by the Board on International and Comparative Studies, and the board has recommended that the study be further developed before it receives Federal funding.

Another venture in international education studies by NCES is a group of activities

centering on secondary analysis and statistical reports. These reports would attempt to: generate a comparison of education indicators from Japan and the United States; develop more international indicators; and generate a summary report of international studies of student achievement.

Selected Publications:

National Assessment of Educational Progress:

- 1985-86 Bridge Study Report (August, 1988)
- Computer Competence: The First National Assessment (1986 Assessment) (April, 1988)
- Crossroads in American Education (Overview of Math, Science, Reading, and Writing, 1986 Assessment) (February, 1989)
- Data Tape: 1986 NAEP Public-Use Data Tape (Revised) (August, 1988)
- Data Tape: NAEP Public-Use Data Tape for Writing Mechanics, 1983-84 (November, 1988)
- Educational Progress of Language Minority Children: Findings from NAEP 1985-86 Special Study (May, 1988)
- Mathematics Objectives: 1990 Assessment (February, 1989)
- National Assessment of Educational Progress 1983-87: A Bibliography of Documents in the ERIC Database (September, 1988)
- Policy Paper on work and learning, 1984-86 (March, 1989)
- School Climate and Reading Performance (October, 1988)
- The Mathematics Report Card: Are We Measuring Up? Trends and Achievement Based on the 1986 National Assessment (June, 1988)
- The Science Report Card: Elements of Risk and Recovery. Trends and Achievement Based on the 1986 Assessment (September, 1988)

International Education:

- A World of Differences: An International Assessment of Mathematics and Science (January, 1989)
- International Comparisons of Teacher Salaries: An Exploratory Study (July, 1988)
- International Conference on Cross-national Education Indicators (August, 1988)
- The Underachieving Curriculum; Assessing U.S. School Mathematics From an International Perspective (January, 1987)

High School Transcript Studies:

- How Well Do High School Graduates of Today Meet the Curriculum Standards of the National Commission on Educational Excellence? (September, 1983)
- An Analysis of Course Offerings and Enrollments as Related to School Characteristics (April, 1984)
- American Education: Making It Work (May, 1988)
- Summary of Findings and Recommendations: National Assessment of Vocational Education (July, 1989)
- Handicapped and Disadvantaged Students: Access to Quality Education (August, 1989)
- Secondary Vocational Education (October, 1989)
- What Americans Study (Published by ETS) (1989)

Educational Assessment

Surveys

	<i>Year of Data Collection</i>					
	1988	1990	1992	1994	1996	1998
National Assessment of Educational Progress						
<i>Reading</i>	X	X	X	X	X	X
<i>Mathematics</i>	X	X	X	X	X	X
<i>Science</i>		X		X		X
<i>Writing</i>	X		X		X	
<i>History/ Geography</i>	X			X		
<i>Civics</i>	X					

	<i>Year of Data Collection</i>							
	1980	1981	1982	1983	1984	1985	1986	1987
High School Transcripts Study			X					X

National Longitudinal Studies

The National Longitudinal Studies program at NCES was established to provide ongoing, descriptive information about what is occurring at the various levels of education and the major transition phases of students' lives. In this way, intervening processes can be studied. To do this requires the periodic examination of educational and occupational attainment, aspirations, attitudes, and motivations during the pivotal years before, during, and after high school and college. With extensive questioning over succeeding years, longitudinal studies have made long-range comparisons between what individuals expect and what actually occurs. Consequently, such studies are critical to understanding the processes by which education leads individuals to develop their abilities and their roles in society.

NCES is conducting three longitudinal surveys. The first began with the high school senior class of 1972. This was the National Longitudinal Study of 1972. The second, known as High School and Beyond, began with both the sophomore and senior classes of 1980. The third, the National Education Longitudinal Study of 1988, began with the eighth grade class of 1988. Two new postsecondary longitudinal studies are currently under design: the Beginning Postsecondary Students longitudinal study and the Baccalaureate and Beyond longitudinal study. These two surveys will follow beginning and completing students through various educational, social, and work-related experiences. Unlike the three earlier longitudinal studies which began with twelfth-, tenth-, and eighth-grade cohorts, Beginning Postsecondary Students and Baccalaureate and Beyond will begin with postsecondary student cohorts.

Data Uses:

The National Longitudinal Study of 1972 (NLS-72) data have been widely used for investigating educational policy issues. For example, in the early 1980s, a congressional agency turned to these data to develop a model for estimating the costs of tuition tax credits. More recently, capsule descriptions of this cohort have been produced; attrition rates from college have been studied, as have transitions from high school and college into the workplace. Postsecondary attainment, access and financial aid studies have all used NLS-72. A recent article in a major newspaper noted that the findings of the NLS-72 studies have produced data which yield significant insights into contemporary America.

The enlarged scope of High School and Beyond (HS&B) has generated even more interest than its predecessor. Like NLS-72, HS&B has produced a number of capsule descriptions of high school students. Additionally, HS&B data have been used to study the achievement of Hispanic students, discipline and order in the high schools, economic issues such as students working while in school, comparisons of public and private schools, and coursework patterns of American high school students.

In designing the base-year survey for HS&B, advice and recommendations were sought from numerous groups with interest in secondary and postsecondary education and also from policy analysts who had worked with data from the 1972 study. As a result, HS&B data files are extremely useful for examining a wide variety of educational policy issues. They also make it possible to compare the students of 1980 with those of 1972.

The National Assessment of Vocational Education (NAVE) utilized the findings from the HS&B study in a number of their reports. For example, NAVE used HS&B data for studies which attempted to measure: high school curricular experiences as they relate to vocational education; course enrollment patterns; and student financial aid as it relates to postsecondary vocational education.

Surveys and Studies:

The National Longitudinal Study of 1972:

Young people's success in making the transition from high school or college to the work force varies enormously for reasons only partially understood. Some cling to dependency; others move into self-determination smoothly. The National Longitudinal Study of 1972 (NLS-72) base year study together with the 5 follow up surveys attempted to discover how these transitions evolve.

DESIGN:

The sample for the base year NLS-72 was a stratified, two-stage probability sample of students from all schools, public and private, in the 50 States and the District of Columbia with a twelfth grade enrollment during the 1971-72 school year.

NLS-72 began in 1972 with a random sample of 18 high school seniors who were selected from each sample school agreeing to participate. Data were collected by mail, telephone, and interviews. Additionally, from school records, the survey obtained data for each senior on high school curriculum, credit hours in major courses, grade point average, standardized test scores, and related information. To conduct intensive studies of disadvantaged students, NCES oversampled schools in low income areas and schools with significant minority enrollments.

The size of the student sample was increased during the first follow up survey because base year nonrespondents were recontacted at that time. Those who provided base year information were retained and included in later follow up efforts. Consequently, in 1972 the size of the sample was 16,683, but the sample size of the first follow up in 1973 jumped to 21,350. Subsequent follow ups in 1974, 1976, 1979, and 1986 contained sample sizes of 20,872; 21,807; 18,630; and 12,841 respectively.

NLS-72 has been constructed to produce representative data at the national level. It was drawn from the cohort of students who were in the 12th grade in 1972.

COMPONENTS:

Base-Year Survey:

Age; sex; racial/ethnic background physical handicap;
socioeconomic status of family and community;
school characteristics; future educational and work plans;
test scores; school experience; school performance;
work status; work performance and satisfaction.

**Follow up Surveys
(1973, 1974, 1976,
1979, and 1986):**

Age; sex; marital status; community characteristics;
educational and work plans; educational attainment;
work history; attitudes and opinions; postsecondary school
characteristics; grade average; credits earned;
financial assistance for postsecondary education.

POLICY AND RESEARCH ISSUES:

NLS-72 can provide information about quality, equity and diversity of educational opportunity; the effect of those factors on cognitive growth, individual development and educational outcomes; changes over time in educational and career outcomes; and other transitions over time. However, NLS-72 can provide data for the sampled cohort only for the period from 1972-86.

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High School and Beyond:

New education issues arose after NCES began its longitudinal study of the 1972 senior class. Declining test scores and minimum competency testing, for example, caused concern among parents and educators alike. So did the rate at which many students dropped out before graduation. Increased opportunities in vocational education opened new vistas for youths attentive to their futures. And, anxiety over access to postsecondary and vocational education brought sharper focus on the education experience of Hispanic and other minority youths.

To examine these and other issues, NCES initiated a second longitudinal study, High School and Beyond (HS&B), to complement the first. HS&B studied the high school students of 1980. It attempted to collect the same types of data gathered in the National Longitudinal Study of 1972. However, the second study differed from the first in two significant ways. First, it addressed many newer elements of the educational process. And second, it included a sophomore cohort of 1980 as well as a senior cohort. Additionally, adding the sophomore cohort made it possible to address the issue of high school dropouts, and to study changes and processes during high school.

DESIGN:

The study design provided for a highly stratified national probability sample of over 1,100 secondary schools as the first stage units of selection. Certain types of schools were oversampled to make the study more useful for policy analyses: public schools with a high percentage of Hispanic students; Catholic schools with a high percentage of minority group students; alternative public schools; and private schools with high achieving students. The initial national sample for High School and Beyond was considerably larger than that employed in NLS-72. In this stage, 36 seniors and 36 sophomores were selected in each school. Parents of these students were also sampled. In schools with fewer than 36 students in either of these groups, all eligible students were selected. Over 30,000 sophomores and 28,000 seniors enrolled in 1,015 public and private high schools across the country participated in the base year survey.

The base year of this sample survey, which was conducted early in 1980, collected data from over 58,000 students enrolled in either tenth or twelfth grade (30,000 seniors and 28,000 sophomores).

Data collection instruments in the base-year survey included: 1) sophomore and senior questionnaires with a series of cognitive tests, 2) school questionnaires, 3) teacher comment checklists, 4) second language questionnaires, and 5) parent questionnaires. The student questionnaire focused on individual and family background, high school experiences, work experiences and future plans. Cognitive tests administered to students measured both verbal and quantitative abilities. Sophomore tests included brief achievement measures in science, writing, and civics while seniors were asked to respond to tests measuring abstract and nonverbal abilities. The parent questionnaire elicited information about how family attitudes and financial planning affect educational goals. The school questionnaire gathered information about enrollment, staff, educational programs, facilities and services, dropout rates, and special programs for handicapped and disadvantaged students. The teacher comment checklist provided teacher observations on students participating in the survey.

The initial study (NLS-72) laid the groundwork for comparison with HS&B. It recorded the economic and social conditions surrounding high school seniors in that year and, within that context, their hopes and plans. It has since measured the outcomes while also observing the intervening processes. High School and Beyond allows researchers to monitor changes by retaining the same goals, measuring the economic returns of postsecondary education for minorities, delineating the need for financial aid, etc. By comparing the results of the two studies, researchers can determine how hopes, plans, and outcomes differ in response to changing conditions or remain the same despite such changes.

Additional concerns of HS&B encompass issues that have surfaced since NLS-72 began: How did the availability (or lack thereof) of student financial aid alter student plans for further education? Have middle-income families altered their attitude toward postsecondary education? What will be the effect of changes in Federal student financial aid? These questions, as well as concerns about declining test scores, youth employment, and bilingual education are addressed, along with a host of others.

The longitudinal design of the study called for follow up surveys of substantial subsets of the two cohorts at 2-year intervals. Data collection for the first follow up began in spring 1982. Subsequent follow ups were also undertaken in 1984 and 1986, and another follow up is planned for 1992. The first follow up survey conducted in 1982 sampled almost 40,000 students (12,000 seniors and 27,000 sophomores), the second in 1984 approximately 27,000 students (12,000 seniors and 15,000 sophomores) and the third in 1986 almost 27,000 students (also 12,000 seniors and 15,000 sophomores).

Data from these studies enable analysts to determine how student plans and aspirations have changed or been realized over time. The first follow up of sophomores also provides insights into the school dropout problem and to the influence of the last 2 years of high school on student attitudes and aspirations. The later follow ups made it possible to trace the consequences of dropping out, and the extent to which dropouts later return and complete high school. In brief, HS&B provides information throughout the 1980s on the educational, vocational, and personal development of young people as they move from high school into postsecondary education or the work force, and then adult life.

The sample in HS&B was formed so as to be representative at the national level. There were two universes of individuals from which the sample was drawn: the cohorts who were in the 10th and 12th grades in 1980.

COMPONENTS:

Student Questionnaires:

Age; sex; racial/ethnic background; religion; socioeconomic status of family and community; school experiences; test scores; school performance; future educational plans; family status and orientations; work experience and satisfaction; future occupational goals; plans for and ability to finance postsecondary education; and cognitive tests.

School Questionnaire:

Filled out by an official in each participating school; provided information on: enrollment; staff; educational programs; facilities and services; dropout rates; and special programs for handicapped and disadvantaged students.

**Teacher Comment
Checklist:**

Filled out by a teacher of the sampled student; contained teacher observations on the student.

**Parent
Questionnaire:**

Family attitudes; family income; employment, occupation; salary; financial planning; and how these affect postsecondary education and goals.
(This questionnaire was mailed to a sample of parents from both cohorts.)

**Follow up surveys
(1982, 1984, 1986):**

Sophomores: similar information as collected in the base year survey. In addition, student transcripts and data on dropouts were collected.
Seniors: age; sex; marital status; community characteristics; work plans; educational attainment; work history; attitudes and opinions; postsecondary school and program characteristics; postsecondary credits earned; type of financial aid for postsecondary education.

POLICY AND RESEARCH ISSUES:

The base year survey of HS&B and three follow up surveys have addressed the issues of educational attainment, employment, family formation, personal values, and community activities since 1980. For example, a recent major study on high school dropouts used HS&B data to demonstrate that a large number of dropouts return to school and earn a high school diploma or an equivalent certificate. Other examples of issues and questions that can be addressed with HS&B data are: A) How, when and why do students enroll in postsecondary education institutions? B) Did those who (while in high school) expect to complete the baccalaureate (BA) degree actually do so? C) How has the percentage of recent graduates from a given cohort who enter the work force in their field changed over the past years? D) What are the long-term effects of not completing high school in the traditional way? How do employment and earning event histories of traditional high school graduates differ from those who did not finish high school in the traditional manner? E) Do individuals who attend college earn more than those individuals who do not attend college? What is the effect of student financial aid? What percentage of college graduates are eligible or qualified to enter a public service profession such as teaching? How many enter full-time in the area for which they are qualified? F) How and in what ways do public and private schools differ?

For more information on High School and Beyond contact:

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National Education Longitudinal Study of 1988:

The National Educational Longitudinal Study of 1988 (NELS: 88) is the third major longitudinal study sponsored by the NCES. The two studies that preceded NELS:88, the National Longitudinal Study of 1972 (NLS-72), and High School and Beyond (HS&B) surveyed high school seniors (and sophomores in HS&B), through high school, postsecondary education, and work and family formation experiences. Taken together, the longitudinal studies provide not only measures of educational attainment, but also rich resources in determining the reasons for and consequences of academic success and failure. NELS:88 seeks to expand on this knowledge-base by following children from an earlier age (8th graders) and by updating information throughout the 1990s.

DESIGN:

Two-stage probability sampling was used to select eighth grade schools and students in NELS:88. The first stage involved stratified sampling of some 1,000 public and private schools from a universe of approximately 40,000 schools containing eighth grade students. The second stage included random samples of approximately 26 students per school. Some 26,000 eighth graders and their parents, their teachers, and their school principals were surveyed. When the student sample was selected, one parent, and two teachers of each student were also selected as a subsample.

NELS:88 is the first NCES longitudinal study to begin surveying students as early as eighth grade. Hispanic- and Asian-American students were oversampled, so as to analyze the performance of language-minority students. The first follow up survey will revisit the same sample of students in 1990, when they are in tenth grade.

NELS:88 is designed to provide trend data about critical transitions experienced by young people as they develop, attend school, and embark on their careers. It will complement and strengthen state and local efforts by furnishing new information on how school policies, teacher practices, and family involvement affect student educational outcomes (i.e., academic achievement, persistence in school, and participation in postsecondary education). For the base year, NELS:88 was structured as a multi-faceted study questionnaire with four cognitive tests, a parent questionnaire, a teacher questionnaire, and a school questionnaire.

The design for NELS:88 First Follow Up Survey includes 4 questionnaires: student, school administrator, teacher, and dropout. Students and dropouts will take cognitive tests in reading, science, social science, and math. The tests are designed to reflect tenth grade coursework, but also have enough overlapping items with the eighth and twelfth grade tests to permit measurement of academic growth. Selected teachers of each sampled student will provide information about the student's study habits and performance and about instructional practices in the classes the students take. In 1990, the full survey of NELS:88 First Follow Up will be conducted between February and May.

The base year sample was constructed so as to be representative at the national level. The sample for the student survey was drawn from the cohort who were eighth graders in 1988; the

parent survey was drawn from the parents of these students; the school survey was drawn from the school principal or other administrator at the schools the surveyed students attend; and the teacher survey was drawn from the teachers of the same students.

COMPONENTS:

Base Year Student Questionnaire:

Family background items including household composition; parental education and occupation; language use; sex; race/ethnicity; opinions; values and interaction with parents regarding in- and out-of-school activity; educational and occupational goals for the future; perceptions about self and impressions of school climate, teachers and schoolwork; participation in classes and activities and self-reported grades. Additionally, four cognitive tests concerning reading, math, science, and history/government are administered.

Parent Questionnaire:

Family background items: family size; parental education; age; occupation; sex; marital status; race/ethnicity; family language use; socioeconomic status; parental participation in student course selection; long-range educational planning; in- and out-of-school activities; establishing home discipline and interaction with the school; family educational expenses and sources of income for children's education.

School Administrator Questionnaire:

School characteristics: grade span; type; enrollment and major program orientation; policies and practices; admission procedures and tuition; grading; testing and minimum course credits; gifted and talented programs; activities and school climate; student characteristics: average daily attendance; migration; race/ethnicity; single parent households; limited English proficiency classes; and special student services such as remedial classes and job-training; teaching staff characteristics: size; race/ethnicity; salary; degree; organization of institutions and percentage of language assistance classes.

Teacher Questionnaire:

Teacher characteristics: sex; race/ethnicity; age; experience; certification; degree; foreign language proficiency; in-service education; classroom preparation; parent contact; perception of school climate; and experience teaching gifted and talented children. Teacher perceptions of the sampled student's classroom performance, and personal characteristics: students' behavior; academic performance; attitudes; problems and handicaps; teacher descriptions of teaching practices including homework assigned, use of instructional materials, choice of textbook/workbook, curriculum, and topical coverage.

POLICY AND RESEARCH ISSUES:

The longitudinal design of this study permits the examination of change in young people's lives and the role of school in promoting growth and positive life outcomes. NELS:88 data can be used to investigate a variety of topics, including the following.

The transition from elementary to secondary school: The survey will permit the investigation of the ways students are assigned to curricular programs and courses, and how such assignments affect their academic performance as well as future career and postsecondary education choices.

Students' academic growth over time, and the family, community, school and classroom factors that promote such growth: The goal will be to continue to identify school and classroom characteristics and practices that promote student learning. The study will pay special attention to the changing composition of the family, which is evidenced by increasing numbers of working mothers and families headed by single parents.

The features of effective schools: By surveying students, teachers, and school administrators, NELS:88 will enable a holistic assessment of student educational outcomes. Thus, it will be possible to identify those school attributes that are associated with student academic achievement, and other selected student behaviors.

The process of dropping out of school, as it occurs from eighth grade on: NELS:88 provides the unprecedented opportunity to study young dropouts on a national scale; to examine the contextual factors associated with dropping out, especially those related to the school; and to profile the movement of students in and out of school, including alternative high school programs.

The role of the school in helping the disadvantaged: Given the factors of increasing teenage pregnancy rates, increasing poverty among children, and the growing proportion of language-minority students, there is ongoing need for research on the school experiences of the

disadvantaged and the approaches that would hold the greatest promise for assisting them. By design, the NELS:88 sample contains ample representations of disadvantaged students.

The school experiences and academic performance of language-minority students: NELS:88 has oversampled Hispanics and Asians/Pacific Islanders to allow meaningful analyses of these subpopulations. Specifically, the data will provide information on variation in achievement levels, and bilingual education needs and experiences.

Attracting students to the study of mathematics and science: The data will reveal the preparation students receive nationwide and the degree to which their interest is captured and they are encouraged by their teachers and school to study advanced mathematics and science.

For further information on the National Longitudinal Study of 1988 contact:

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Plans for Longitudinal Studies:

Plans call for a fourth follow up of High School and Beyond during 1992. Issues will focus not only on educational attainment, and various outcomes, but also on family formation, and career issues as well.

Follow up studies for NELS:88 will begin in 1990. By that time the eighth grade class of 1988 will be the sophomore class of 1990. The second and third follow ups are scheduled for 1992 when most of the cohort will be seniors in high school, and 1994 when most of the cohort will be in the workforce or participating in postsecondary education.

As noted above, the Center has three major longitudinal studies: NLS-72, HS&B, and NELS:88. While each of these studies can provide data concerning issues related to the transition from high school to postsecondary education, they are of limited utility for other postsecondary issues. The NLS-72, HS&B and NELS:88 samples do not represent all postsecondary students. They cannot capture the diversity of college students in terms of older students, part-time students, non-high school graduates enrolled in postsecondary vocational programs, or students who take more than four years to complete a bachelor's degree.

As part of its effort to improve and broaden its longitudinal studies program, NCES is planning two new surveys under the heading of Postsecondary Longitudinal Studies (PLS). Samples will be drawn from the National Postsecondary Student Aid Study (NPSAS), and there will be two separate components. One will be the Beginning Postsecondary Students (BPS) survey, a survey of first-time students (freshmen) identified by NPSAS. The second component will be the Baccalaureate and Beyond (B&B) study, based on graduating students at the baccalaureate or masters level.

The BPS will be based on all students first entering postsecondary education in 1989-90, and will follow them through their postsecondary educational experiences and into the labor force or other endeavors. These students will be followed at two year intervals over a six year period to assess continuation in postsecondary education as well as progress. The study will trace those who leave postsecondary education prior to the completion of a degree, whether they completed their academic program or not. The survey will include students in 4-year, 2-year and less than 2-year institutions.

The BPS survey will enhance and expand the base of information available regarding persistence, progress, and attainment from initial time of entry into postsecondary education through leaving and entering the work force. At the completion of postsecondary education, full transcript and financial aid records will be obtained, providing complete information on progress and persistence.

The BPS, by following all new postsecondary entrants, will provide a unique perspective on what happens to persons as they enter and pursue a college education, because it will include both non-traditional, or older, students as well as traditional students (i.e., those entering postsecondary education immediately after high school) who enter at the same time as a postsecondary cohort. Other longitudinal studies, which tend to follow a single age cohort, do not provide enough data about non-traditional students starting at any one time to adequately study their progress and attainment compared to their more traditional classmates. BPS will be able to determine how many new entrants are traditional or non-traditional students, and also be able to determine educational aspirations, progress, persistence, and educational attainment for

both types of students.

The Baccalaureate and Beyond (B&B) program, on the other hand, will be based on those students about to complete a bachelors' or masters' degree, regardless of the length of time they have taken to complete the degree. This longitudinal study will follow graduating seniors into graduate/professional school, and into the work force. It will replace the current Recent College Graduates program.

The B&B sample will be drawn from the 1993 NPSAS, and it will identify and follow recent graduates over a six-year period. It will involve students identified as being within a year of completing a baccalaureate degree (BA), and to a limited extent, those who are completing a master's degree (MA) in the same time period. Students who receive a BA or MA degree within that year will be surveyed concerning education and work plans after completion of that degree. Postsecondary transcripts will also be requested from the institution they were attending in the Fall 1993 term.

One purpose is to determine the frequency of problems associated with access to and entry into graduate/first professional levels of education and the work force. A second purpose is to provide information on the issues addressed by the Recent College Graduates studies, and contribute new information concerning educational attainment, access to and progress through graduate or professional programs, entry into the labor market, and the rate of return for postsecondary education. Rate of return or cost/benefit issues are related to both the individual and to society as a whole. Therefore, entry into and continued participation in public service professions will be included, with emphasis on students certified for and/or entering the field of teaching.

Selected Publications:

National Longitudinal Study of the High School Class of 1972:

A Capsule Description of Young Adults Four and One-Half Years After High School
A Capsule Description of Young Adults Seven and One-Half Years After High School
Attrition From College: The Class of 1972 Two and One-Half Years After High School
Graduation
College Attainment Four Years After High School
Highly Able Students Who Did Not Go To College
Distribution and Packaging of Student Financial Aid
Transfer Students in Institutions of Higher Education
Experiences of Recent High School Graduates: The Transition to Work and Postsecondary
Education (Published by Lexington Books)
National Longitudinal Study of the High School Class of 1972, Study Reports Update: Review
and Annotations

High School and Beyond:

A Capsule Description of High School Students
Youth Employment During High School
NCES Study Examines Changes in Coursework of High School Seniors (Bulletin)
High School Seniors Will Work for Less than the Minimum Wage (Bulletin)
Public and Private Schools
Discipline and Order in American High Schools
The Achievement of Hispanic Students in American High Schools
Dropout rates in the United States: 1988
High School and Beyond: 1980 Sophomore Cohort First Follow Up
High School and Beyond: 1980 Senior Cohort First Follow Up
High School and Beyond: 1980 Sophomore Cohort Second Follow Up
High School and Beyond: 1980 Senior Cohort Second Follow Up
High School and Beyond: 1980 Sophomore Cohort Third Follow Up
High School and Beyond: 1980 Senior Cohort Third Follow Up

National Education Longitudinal Study of 1988:

A Profile of the American Eighth Grader: NELS:88 Student Descriptive Summary (April, 1990)

Longitudinal Studies

Surveys

Base Year and Years of Follow Up Studies

	1972	1973	1974	1975	1976	1977	1978	1979	1986
National Longitudinal Study of 1972	B ¹	F ²	F		F		F		F

Base Year and Years of Follow Up Studies

	1980	1981	1982	1983	1984	1985	1986	1990	1992
High School and Beyond	B		F		F		F		F

Base Year and Years of Follow Up Studies

	1988	1989	1990	1991	1992	1993	1994	1995	1996
National Educational Longitudinal Study of 1988	B		F		F		F		F

Base Year and Years of Follow Up Studies

	1990	1991	1992	1993	1994	1995	1996	1997	1998
Beginning Post-Secondary Students	NPSAS		F		F		F		F

Base Year and Years of Follow Up Studies

	1993	1994	1995	1996	1997	1998	1999	2000
Baccalaureate and Beyond	NPSAS	F		F		F		

¹ Base year

² Follow-up survey

Vocational Education

With the passage of the Carl Perkins Act in 1984, NCES began to develop plans for a new system to collect information on vocational education. Through discussions with various concerned groups, NCES was able to identify the major national policy issues concerning vocational education and the kinds of information needed to help inform policy discussions. NCES also learned how and why States and localities differ from one another in what they count as vocational education programs, program enrollments, completers and leavers, placement, and vocational education staff.

Accordingly, the NCES data collection system has moved away from administrative records on vocational education towards general purpose data systems covering all areas of education. The Data on Vocational Education (DOVE) plan, presented to House and Senate Committee staff in January of 1987, outlined the utility of the "derived data" concept. In essence, NCES surveys would include appropriate vocational data parameters. Analyses of these data would provide an essential context for understanding the relationship of vocational education to all education and to non-vocational education. The DOVE concept includes secondary and postsecondary data systems.

Among these systems at the secondary level are the NCES longitudinal studies program, and the newly designed Schools and Staffing Survey (SASS). At the postsecondary level, the Integrated Postsecondary Education Data System (IPEDS), the National Postsecondary Student Aid Survey (NPSAS), and the longitudinal studies, such as the National Longitudinal Study (NLS-72) and the recently instituted National Educational Longitudinal Study, 1988 (NELS:88).

SASS directly surveys administrators and teachers. As a result, classification of teachers as vocational and nonvocational is not dependent upon administrative records, but upon what the teacher identified as the classes he or she taught. IPEDS, as opposed to the previous Higher Education General Information Survey (HEGIS), includes within its universe noncollegiate postsecondary institutions, both public and private. A number of these institutions enroll many students in postsecondary vocational programs.

Data Uses:

A principle user of vocational data is Congress. The Perkins Act mandates:

The Secretary shall develop, within the National Center for Education Statistics, a national vocational education data reporting and accounting system using uniform definitions ... [the system is to be developed] in consultation with Congress (PL 98-524).

The Data on Vocational Education (DOVE) plan was developed in response to this mandate. The concept of "derived data" - the capability of deriving vocational data from the

overall data collections - is making a wide range of national data available for analysis of vocational education issues. For example, requests for vocational data from Congressional staff was particularly noticeable during the 1989 Perkins reauthorization hearings. Data have been supplied to other Federal offices as well.

Analyses by NCES staff of vocational data in NCES databases have made a considerable number of reports available on a range of vocational topics - students, teachers, and institutions. These data have been made available to vocational administrators at the State level, to researchers at universities, and to national vocational associations.

Surveys and Studies:

Listed below are the primary databases and components which are used by NCES for the analysis of vocational education issues. Only brief summaries of the surveys of interest are presented in this chapter. If a more complete description of a survey or component is needed, the reader should refer to the appropriate chapter. (NOTE - In this chapter, all major surveys are underlined; the components of particular surveys are *italicized*. The surveys are grouped by category - secondary, postsecondary, and longitudinal studies.)

Secondary Data Collection:

The Schools and Staffing Survey:

School Administrator Questionnaire:

Surveys the administrators of schools asking information about his or her teaching and administrative background and school characteristics.

Teacher Demand and Shortage Questionnaire:

Surveys the school district level for public schools and at the school level for private schools.

Survey of Districts:

Surveys the characteristics of the school districts in which the school is located.

Teacher Questionnaire:

Surveys a sample of teachers in each school surveyed, asking about their educational background, professional experience, classes currently taught, attitudes about their school and their profession, and their total family income and its sources.

Transcript Studies of 1982 and 1987:

Complete high school transcripts including the 9th through the 12th grade; includes courses taken and grades and credits earned. Personal data elements include: race/ethnicity; sex; age; type and severity of handicapping condition.

Postsecondary Data Collection:

Integrated Postsecondary Education Data System:

Survey of Completions:

Institutions report all postsecondary awards regardless of level, by field of study. This allows for identifying the number of individuals trained in vocational fields annually.

Institutional Characteristics and Enrollment:

Institutions report on enrollments and characteristics, this permits analysis of the types and sizes of institutions that offer vocational programs.

Fall Enrollments in Occupationally- Specific Programs:

Full- and part-time enrollments of men and women; completers and early leavers, by sex; length of program; average change in enrollment ; full- and part-time staff, by sex and assignment.

Salaries, Tenure, and Fringe Benefits of Full-time Instructional Faculty:

Number of full-time instructional faculty by rank, sex, tenure status, and length of contract; salaries and fringe benefits of full-time instructional faculty.

*Financial
Statistics:*

Current fund revenues by source (e.g., tuition and fees, government, private gifts); current fund expenditures by function (e.g, instruction, research, plant maintenance and operation); physical plant assets and indebtedness; and endowment investments.

National Postsecondary Student Aid Study (NPSAS):

The Student Survey:

Level; major field of study; type and control of institution; financial aid; cost of attendance; age; sex; race/ethnicity; marital status; income.

*The Out-of-School
Student Loan
Recipient Survey:*

Major field of study; years attended and degrees received (if any); type and control of institution; financial aid; age; sex; race/ethnicity; marital status; income; and employment history (occupation, industry, and salary).

*Student Record Abstract
Data Survey:*

Level; major field of study; type and control of institution; financial aid; cost of attendance; grade point average (GPA); age; sex; race/ethnicity; marital status; income; employment and salary.

Longitudinal Surveys:

National Longitudinal Survey of 1972 (NLS-72):

Surveys ability; socio-economic background; educational enrollments and attainments; geographic mobility; labor force outcomes; military outcomes; and marriage and family.

High School and Beyond (HS&B):

Building on the NLS, HS&B attempts to 1) identify changes since 1972, 2) provide critical educational and vocational choices made between sophomore and seniors years of high school, and 3) provide more detailed information on factors affecting such aspects of development as family formation behavior, educational behavior, intellectual development.

National Education

Longitudinal Survey of 1988 (NELS:88):

Surveys students in grade eight, but because most vocational education is not available before the eleventh grade, significant analysis of vocational and non-vocational students cannot be made before the follow up in 1992.

Information pertinent to student decision-making or educational behavior will be included in the first follow-up when students are in the tenth grade.

Plans for Vocational Education:

SASS and the longitudinal studies are the primary sources of vocational data in secondary education. Beginning in 1991, SASS will be conducted every 2 years. NELS:88 will conduct follow ups, every 2 years, and plans are already underway for the 1990 and 1992 follow ups. A fourth follow up of HS&B will be undertaken in 1992.

At the postsecondary level, the Integrated Postsecondary Education Data System (IPEDS), the National Postsecondary Student Aid Study (NPSAS), and the longitudinal studies are the primary sources for vocational education data. Most of the IPEDS surveys will be conducted annually, while NPSAS will be conducted every three years, with the next survey occurring in 1990. Longitudinal studies at the postsecondary level will be both initiated and continued throughout the 1990s. As noted above, The National Educational Longitudinal Study of 1988 (NELS:88) will continue with follow up studies, as will High School and Beyond (HS&B). Two new, postsecondary longitudinal studies will also be initiated: Beginning Postsecondary Students and Baccalaureate and Beyond will follow postsecondary students in and beyond the postsecondary level. (For a description of these 2 studies see the "Plans" section of Chapter 5.)

NCES has contracted for analyses of these data sets to provide new comparisons of vocational and nonvocational activities. One of the first activities will be to make extensive comparisons of the high school graduating class of 1982 and 1987. As soon as SASS data tapes are available, analyses will begin comparing vocational and nonvocational teachers. Additional analyses will compare vocational programs in public and private schools, vocational backgrounds of administrators, and a comparison of difficulties in hiring vocational as opposed to nonvocational teachers.

Selected Publications:

- Classifications of Secondary Vocational Education Courses and students, Part 1. (February, 1986)
- Classification of Secondary Vocational Education Courses and Students, Part 2. (October, 1986)
- Courses Taken in High School by Students in Different High School Programs. (December, 1985)
- Credits Earned by Field of Study and Level of Attainment for Postsecondary Vocational Students who Were High School Graduates in 1972. (April, 1988)
- Credits Earned by Year and Level of Attainment for Postsecondary Vocational Students who were High School Graduates in 1972. (April, 1988)
- Directory of Less-Than-2-Year Postsecondary Schools, Volume 2, 1987-1988. (November, 1988)
- Enrollment and Aid Status of Postsecondary Vocational Students who Were High School Graduates in 1972. (April, 1988)
- Enrollment, Completion, Attrition, and Vocational Course-taking Patterns in Postsecondary Education: A Summary Comparison of 1972 and 1980 High School Graduates Entering Two-year Institutions. (August, 1988)
- Entry and Persistence of Postsecondary Vocational Students who Were High School Graduates in 1972. (April, 1988)
- Field of Entry, Timing, and Completion for Postsecondary Vocational Students who were High School Graduates in 1972. (April, 1988)
- High School and Beyond Tabulation: Vocational Education Credits Earned by 1980 High School Sophomores Who Graduated in 1982. (July, 1984)
- Highest Educational Degree Attained by 1972 High School Seniors by Sex, Race, Type of High School, and Type of Community, as of Spring 1986. (September, 1988)
- Highest Educational Degree Attained by 1980 High School Sophomores, by Sex, Race, Type of Community, and Type of High School, as of Spring 1986. (May, 1986)
- Highest Educational Degree Attained by 1980 High School Seniors, by Sex, Race, Type of Community, and Type of High School, as of Spring 1984. (September, 1988)
- Highest Educational Degree Attained by 1982 High School Seniors by Sex, Race, Type of Community, and Type of High School, as of Spring 1986. (May, 1986)
- Nation at Risk Update Study, Preliminary (comparisons of courses taken by 1982 and 1987 high school graduates). (May, 1988)
- Patterns of Participation in Secondary Vocational Education-- 1978-1982. (August, 1984).
- Postsecondary Institutions Offering Vocational/Technical Programs: Analysis Findings from High School and Beyond (1980-1986). (September, 1988)
- Profile of 1972 High School Graduates who Were Vocational Students at the Postsecondary Level. (March, 1988)
- Secondary Vocation Education and Nonvocational Education Teachers (in review).
- State Policies Concerning Vocational Education. (November, 1988)
- The Postsecondary Vocational Education of 1980 Seniors. (April, 1987)
- The Postsecondary Education of 1972 Seniors Completing AA Degrees and Certificates. (March, 1988)
- The Postsecondary Education of 1980 Seniors Completing Academic AA Degrees. (April, 1987)
- Undergraduate Financing of Postsecondary Education: A Report of the 1987 NPSAS. (May, 1988)

Major Publications of NCES

NCES annually produces three major publications which enjoy wide circulation: *The Condition of Education*, *Digest of Education Statistics*, and *Projections of Education Statistics*. These three publications present statistics on a wide array of education topics. They are used in a number of diverse ways by policymakers, researchers, and the general public.

The Condition of Education:

NCES gathers and publishes information on the status and progress of education in the United States. The Federal authorization (enacted in 1974, but with antecedents to 1867) for these activities states that the Center will "collect, collate, and from time to time, report full and complete statistics on the conditions of education in the United States" (section 406 (b) (1) of the General Education Provisions Act). This legislation mandated an annual statistical report from the Secretary of Education. In 1988, the Hawkins-Stafford Elementary/Secondary School Improvement Amendments (Public Law 100-297, amending section 406 (d)(1)(C) of the General Education Provisions Act) changed that reporting responsibility to be that of the Commissioner of Education Statistics.

In 1975, *The Condition of Education* was created in response to this mandate. The publication attempted to present, in a single volume, an overview of the educational enterprise in the United States. The format of *The Condition of Education* was designed to present statistical information in an accessible manner for a general audience. The *Condition*, by analyzing statistical studies and data, investigated the context of education in this country, educational attainment, financing of education, enrollments, attitudes about school, the supply of teachers, and other related undertakings. The *Condition* also presented statistics on postsecondary education in the United States. Analysis here focused on educational attainment, the financing of postsecondary education, enrollments, age, and data on persistence in postsecondary education. Tables and required technical notes were also included. In short, the *Condition* was an attempt to form a focused view of the state of education in this country.

Later, the *Condition* attempted to develop education "indicators"; that is, key statistics which describe major topics of interest and concern in education today. In 1982, the Department of Education began a collaborative effort with representatives from a large number of education associations who expressed an interest in making data collected by the Center and by other statistical organizations more accessible to the general public and to decision-makers in schools and government. Work began on identifying what constituted an education indicator, and what items of information with relevance to schools would meet the definitional test. From these deliberations, it was concluded that an education indicator consists of statistically valid information related to significant aspects of the educational system and can be a singled valued

statistic or composite index; provides a benchmark for measuring progress or regression over time, or differences across geographical areas or institutions at one point in time, such that substantive inferences can be drawn from presentation of the data; is meant, where appropriate, to be representative of policy issues or aspects of education that might be altered by policy decisions; can be easily understood by a broad audience concerned with education; and is the result of relatively reliable data and not subject to significant modifications as a result of response errors or changes in the personnel generating it.

The concept of education indicators has gained the attention of the U.S. Congress, national organizations, States and localities. To assist the Center in conceptualizing and developing a set of education indicators most useful to policymakers and researchers, Congress recently mandated that NCES convene a special study panel of experts to "make recommendations concerning the determination of education indicators for study and report" (P.L. 100-297). The Commissioner of Education Statistics is to submit the report of the panel to Congress upon completion of its work. NCES expects to revise *The Condition of Education* in the future to reflect those recommendations. The panel should complete its work by June 1991.

Not all possible indicators are published in a given edition of the *Condition*. No more than 50-60 indicators are presented in each year's report. By contrast, the Center's other major compendium, the *Digest of Education Statistics* (see below), includes more than 350 statistical tables, plus figures and appendices. The indicators, therefore, represent a consensus of professional judgement on the most significant national measures of the condition and progress of education at the time, but tempered, necessarily, by the availability of current and valid information. The indicators should include a basic core that can be repeated with information every year, supplemented by a more limited set of indicators based on infrequent or one-time studies.

In future editions, the utility of this report should increase as more diverse, high quality data become available, especially as new time series can be constructed. Elementary and secondary education data will be enhanced by revisions in the basic data collected about public schools in the Common Core of Data and by the results from the Schools and Staffing Survey (SASS) (see Chapter 2), which covers both public and private schools.

For more information on *The Condition of Education* contact:

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Digest of Education Statistics:

The *Digest of Education Statistics* is the Center's primary resource publication on education statistics. It contains a wealth of information on all levels of education from preprimary through graduate education. This reference volume is intended for use by researchers, policy analysts, business, media, students, educators and the general public. The *Digest* has expanded through its long history, as the staff has adopted a policy of continuous development without sacrificing important trend information.

The development of the *Digest* occurred over an extended period of time. For 40 years, from 1916-18 to 1956-58, the statistical component of the Office of Education prepared and published the *Biennial Survey of Education in the United States*. Most of the important data collected by the Office were placed in the *Biennial Survey*, which was a resource used by researchers, planners, and others interested in the field of education statistics. After 1958, publication of the *Biennial Survey* ceased, but the need for a document summarizing the various types of data collected by the Office of Education continued. Thus, in 1962, the first edition of the *Digest of Education Statistics (Digest)* was issued.

The 1989 *Digest* is the 25th in a series of publications. (The *Digest* has been issued annually except for combined editions for the years 1977-78, 1983-84, and 1985-86.) Its primary purpose is to provide a compilation of statistical information covering the broad field of American education from kindergarten through graduate school. The *Digest* includes a selection of data from many sources, both government and private, and draws especially on the results of surveys and activities carried out by the National Center for Education Statistics. The *Digest* contains a considerable amount of material tabulated exclusively for the *Digest* such as summaries of Federal Funds for Education, and detailed tabulations on degrees conferred by colleges and universities. The publication contains information on a variety of subjects within the field of education statistics, including the number of schools and colleges, teachers, enrollments, graduates, educational attainment, finances, Federal funds for education, employment and income of graduates, libraries, and international education. Supplemental information on population trends, attitudes on education, education characteristics of the labor force, government finances, and economic trends provides background for evaluating educating data.

The *Digest* is now divided into seven chapters: All Levels of Education, Elementary and Secondary Education, Postsecondary Education, Federal Programs for Education and Related Activities, Outcomes of Education, International Education, and Learning and Technology. To qualify for inclusion in this publication, material must be nationwide in scope and of current interest and value. The introduction supplements the tabular materials in chapters 1 through 7 by providing a brief overview of current trends in American education. Each chapter contains an introduction to statistical materials describing that sector of education, as well as a series of short paragraphs that describe the most significant data in the chapter. Charts are provided to further illuminate important data. Information on the structure of the statistical tables is contained in the Guide to Tabular Presentation. The Guide to Sources provides a brief synopsis of the surveys used to generate the tabulations for the *Digest*. Also, a "definitions" section is included to help readers to understand the terms used in this publication.

In the past, the *Digest of Education Statistics* has proved to be of interest and value to educational researchers and administrators, government officials, the communications media, the

business community, and the general public. Recently, NCES has begun a program to expand the scope of the material included in the *Digest* to make it even more comprehensive. NCES has also created *Education Statistics: A Pocket Digest* to make basic education statistics available in a two-page flyer. The *Pocket Digest* include statistics enrollments, expenditures, faculty, degrees, and population characteristics in an abbreviated form.

The *Digest* strives for clarity, consistency, and comparability. It places high value on the major recurring surveys, with the objective of providing trend data that researchers and policymakers can use to measure changes over time. It seeks to preserve the major series of education statistics originating with NCES and elsewhere, and to make them readily available to a wide audience of users.

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Projections of Education Statistics

The National Center for Education Statistics is the official source of education projections at the national and State levels in the Federal government. The program accomplishes its mission by performing the following services: projecting key statistics for policy planning; conducting evaluations of past projections and assessing current methodologies; performing research and ongoing model development; and providing consultation on projection methodology to the U.S. Department of Education and outside users.

The program projects statistics in the areas of: enrollments; graduates and earned degrees conferred; instructional staff; and expenditures in elementary and secondary schools and institutions of higher education. The principal publication dealing with projections is the *Projections of Education Statistics (Projections)*. The report provides projections of statistics about elementary and secondary schools and institutions of higher education. Included are data on enrollments, graduates, degrees, instructional staff, and expenditures for the past 15 years, and projections for the next 10 years. The report also contains a methodology section that describes models and assumptions used to develop these projections. Most of the projections are based on three alternative sets of assumptions. Although the middle alternative is the preferred set of projections, the other (high and low) alternatives provide a range of outcomes. The information provided in the report is used by researchers and policy planners in education and related areas.

A summary of these projections is available in a pocket-sized folder called *Pocket Projections*. This brochure is a quick reference for projections of key education statistics. The *Targeted Forecasts* reports is a series begun by NCES in 1987. The purpose was to develop 5-year projections of key education statistics and also highlight projected data for the coming school term. The forecasts are particularly targeted for individuals in business, industry, government, the media, and educators whose work requires information on projected developments and trends affecting American education.

State Projections to 1993 for Public Elementary and Secondary Enrollment, Graduates and Teachers is the first comprehensive publication prepared by NCES that provides projections of key education statistics for public elementary and secondary schools at the State level. The report presents 5 years of projections for enrollment, graduates, and teachers in public elementary and secondary schools. It is designed to provide researchers, policy analysts, and other users with State-level projections developed with a consistent methodology.

For more information on the *Projections of Education Statistics* and projection methodology contact:

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